THE

AMERICAN FARMER.

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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"AGRICOLAS." . . . . . *Virg.*

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APRIL.

"Fled now the sullen murmurs of the North,
The splendid raiment of the Spring peeps forth;
Her universal green, and the clear sky,
Delight still more and more the gazing eye.
Wide o'er the fields, in rising moisture strong,
Shoots up the simple flower, or creeps along
The mellowed soil; imbibing fairer hues,
Or sweets from frequent showers and evening dews."

Work for the Month.

Last month's notes will need little alteration to adapt them to the present. The work begun according to the suggestions then made must be pressed forward to completion. The general breaking up of sod-land should be carried on as fast as circumstances will admit. Plough first tobacco land, or that intended for late planting, or which you may intend to plough a second time before planting. After ploughing, use harrow or roller, or both, to close the seams and kill the grass effectually, otherwise the sod will not rot. Whenever the corn ground is ploughed, begin at once the preparation for planting.

THE CORN CROP.

The special interest of the farmer this month will be in the due preparation of the corn ground. The roller should follow the plough to pack the sods and make the working even. Harrowing and cross-harrowing should then be continued until the whole is put in thorough order. This thorough working will, it is true, encourage the growth of young grass, but it stimulates in like manner the growth of the corn. As the business of the season is to keep the grass down, it is only necessary to go to work on it more promptly. No good farmer should object to see his grounds grow grass freely, for he may be sure at the same time of the rapid growth of his crops, if he gives them due protection.

When the ground is duly prepared the preparation for planting is to be made by laying off furrows so shallow as not to disturb the sod, at such distance as may be preferred. This will depend in a measure upon the character and condition of the soil. A strong loam with a good sod inverted needs no greater distance than three and a half feet square. This well prepared, and with some stimulating fertilizer in the hill, will so forward the young crop that the working may be finished up before harvest, and the roots from that time may have unobstructed range. In that case the crop is not liable to suffer from close planting. Without plants enough, it must be borne in mind, a maximum crop cannot be made; and the difference in the number of hills to the acre at 3½ and 4 feet each way is very material. The prejudice against close planting has arisen from the damage done by working up to too late a period of growth. After the ear begins to form, the crop must be let absolutely alone. Up to that time, quick and diligent working will have kept the grass and weeds well down, and no damage need now be feared from them half so great as the tearing up of the corn roots in the hot summer weather. In lighter lands, or in the absence of a good sod, the distance must be greater.

MANURING.

If manure in the hill is to be used, a fine compost should be made at an early day, a small quantity of which will give an impetus to the young plant. It may be a mixture of ashes and plaster, with the manure saved from the poultry or some other rich material, or a small quantity of ammoniated superphosphate. Manuring in the hill is not necessary if the land be rich or well manured broadcast. It is not desirable, perhaps, to induce too rank a growth of stalk, if there be strength enough to supply ample food for the filling out of the ear.

Whatever manure is applied must be put on early to get the benefit of spring rains in dissolving and mixing it with the surface soil.

OATS AND BARLEY.

It need only be remarked of these crops that the sooner they are sown the better. No full yield of either can be looked for without early seeding. They need time to develop their roots before the hot weather forces them into bearing.

CLOVERSEED.

When to be sown on wheat land so late as April, a harrow should be run over it before seeding, when the surface is a little moist; and the roller should follow immediately after.

PLASTER AND FERTILIZERS.

Plaster should be sown on the second year's growth of clover as the leaves begin to develop, and on the young growth as soon as it gets into the third leaf.

TOBACCO.

The crop may now be got generally into condition for packing. All that had been stripped previous to March should have been thoroughly dried during that month, and now as it softens in the mild weather of April, should be packed as closely as possible in large bulks, and heavily weighted down to preserve it in a soft condition for putting in the hogsheads.

PLANT BEDS.

The most successful growers of plants are those who nurse their beds most carefully, giving them frequent dustings of rich composts every ten days or more, and picking out every sprig of grass often enough to prevent its interfering at all with the young plants. The best remedy against the destructive attacks of the fly is the rapid growth of the plants, and this is most effectually secured by this careful treatment.

ROOT CROPS.

Plough early and very deeply for root crops, of whatever sort, and if practicable, subsoil to the depth of fifteen inches or more. The ground must be in the best condition that repeated ploughing and plentiful manuring can give it, if a maximum crop is wanted; and this should be aimed at always, as a root crop needs much labor and attention at any rate. We have never advised the cultivation of root crops on a large scale as especially profitable. It is to be borne in mind, when we hear of the very large number of bushels per acre, that a very large percentage of the product is water. We do not know that a fair experiment has ever been made of the relative feeding value of any root crop and Indian corn grown upon land of the same quality, and with like preparation and cultivation. We think the roots valuable as affording a change from the dry feeding of winter for stock of every kind, and recommend them on that account.

Early Prejudice against the Potato.

Prejudice, it need not be said, has in remote times been fiercely antagonistic to the introduction and adoption of many a good thing. Tea was first eyed askance in A. D. 1666, and was chiefly used as medicine! Coffee fared not much better; but upwards of a hundred years subsequent to this exotic's first entry into Europe the abhorrence expressed in France of of the *potato* plant was universal. The names of Drake and Raleigh attached no prestige to it. The scientific men in Paris of eighteenth century protested against the introduction of a tuber abounding in poisonous properties, the use of which would originate the most fearful diseases! Even the most moderate opponents asked, protestingly, why this coarse and detestable tuber from the land of the Incas should be forced upon the public while the soil of France was capable of supplying the most salutary and delicious productions of the vegetable kingdom. It required all the perseverance and energy of Parmentier, upheld by poor Louis XVI., who had made a point of giving it a fair trial week after week and month after month in the Palace of the Tuileries to persuade the Parisians to cook a potato.—*Ex.*

The Vegetable Garden.

Prepared for the American Farmer, by DANIEL BARKER, Maryland Agricultural College.

APRIL.

No time should now be lost in carrying on the various operations of planting, sowing, &c. When any of the main crops fail, more seed should be immediately sown, and where they have partially failed, procure plants, if possible, and make good all deficiencies. Now is a good time to destroy slugs; late in the evening and early in the morning they leave their places of concealment, and may be destroyed by fresh lime, which should be strewn over where they abound several mornings and evenings in succession; in the morning, as early as it is light, and in the evening as late as eight or nine o'clock. By perseverance for a short time, a garden may be entirely cleared of this pest. When hard, dry winds and clear weather render it necessary to supply water to recently planted vegetables and seedling crops, they must be attended to without fail, otherwise they had better be allowed to remain in a dormant state until the rain comes, as continued waterings bind the surface of the soil into a hard, impenetrable crust, which is very prejudicial to the germination of the seeds. This may, however, in some degree be prevented by shading from the sun or covering the soil, so as to prevent evaporation as much as possible; frequent waterings are not then necessary and then the soil is kept in an open, porous state.

ASPARAGUS.—The beds will be greatly benefited by liberal waterings with liquid manure, taken from the barn-yard, stable, house, sewerage, &c., and especially, where the plants are weak, be careful to keep the beds free from weeds.

BEANS.—Bush and pole up; several kinds should be planted forthwith; those coming up, should be earthed up after a shower.

BRUSSEL'S SPROUTS.—Seeds of this delicious vegetable should now be sown, and transplant the early sown, to strengthen them, previous to planting out.

CAULIFLOWERS should be liberally supplied with water, and where large heads are required, manure water may be given them once or twice a week. Sow for a succession.

CABBAGE.—Where they were planted a foot apart in the rows during the autumn, every alternate plant may be pulled up for greens as soon as sufficiently large and as required for use. This will give those that remain space and time to attain perfection. A sowing of two or three kinds now will furnish a supply of useful plants to fill up vacant lots as summer crops are taken off. Early Dutch, Sugar Loaf and Winningstad are kinds that may be relied upon.

CELERY.—Transplant young plants upon a slight hot-bed or warm border. If the main crop is not already sown, sow it at once in the open ground upon a warm border.

CORN.—Make plantings for succession.—The Early Darling and Dwarf Prolific Sugar are valuable varieties for family use.

CUCUMBERS, grown in hot-beds, will require constant attention that the beds do not become too moist, or mildew may appear. Sowings may be made in the open air as early as the ground is sufficiently dry and warm.

LETTUCE.—During dry weather give some of the earliest plants a good supply of water, to bring them forward. Make a sowing of two or three kinds. By this means the season of one sowing is prolonged.

ONIONS.—Sets should now be planted upon rich beds, in rows nine inches apart, and be helped with occasional sprinklings of guano on the surface.

POTATOES.—Protect the shoots of potatoes which have made their appearance above ground, by drawing earth over them, and continue to plant for the main crop.

Sow Turnip Radishes for succession; Salsify and Parsley in drills one foot apart; Savoys and Scotch Kale, Sweet Herbs and Tomato for succession; Sea Kale, Rhubarb and Horse Radish—where fresh beds are wanted, they should now be made.

Hoe and cultivate between growing crops, and be very vigilant in keeping down the weeds, dealing promptly with them at every opportunity.

During stormy weather look after tools, garden sash, &c. Put in new lights where required, and see that all is placed in efficient working order, as they will now be required for constant and active use.

☞Always loosen the check-rein before giving water to a horse. Even if the pail is held so high that the rein is not drawn tight, the position is an unnatural one in which to drink.

The Fruit Garden.

Now in most places comes the trying period of the season. In these times (April and May), the head (or whatever he may be styled) of the farm or garden, must be turned into a sort of almanac and monthly register, and his hands require to be magically increased some tenfold. Everything in field and garden demand his attention, and now happy that man should be who can attend to everything at once as soon as it requires attention. "Do it at once" is a grand axiom, and should ever be kept in mind by those who resolve on being orderly and methodical; and without order there will be muddle, there will be doing and undoing, and a considerable waste of boots; but the difficulty is "to do it at once." The order to do so, not unfrequently emanates from "heads" not overburdened with brains; the consequence is, the "do it at once" is not done at all. At this season of the year there will be dozens of things that want doing, and perhaps but few hands and feet to do it. In such circumstances thoughtful arrangements must, or, rather, should be made, so that whilst doing some things thoroughly, others should not be allowed to suffer.

Not only to the "fruit department" are the above remarks applicable, but to all the departments of the field and garden our desire is that they should afford food for reflection.

Where method and system is the order of the day, activity must be exercised in the fruit garden and orchard, as the rapid growth of the trees will require constant attention in removing superfluous shoots, &c.

Strawberry beds will now require attention as to watering, should the weather become dry. After thoroughly clearing the beds, an effectual soaking should be given, and if a moderate watering from the manure tank can be supplied, after the ground has been well saturated with clean water, it will materially assist in securing large fruit. The beds should be mulched as soon after watering as convenient, in order to prevent evaporation and the fruit from being soiled. For mulching we prefer clean straw to any other material we have ever used for the purpose. Strawberries in pots—do not suffer those on which fruit is swelling to get dry; use plenty of liquid manure constantly, clean and weak.

Remove suckers from Currant and Gooseberry bushes. Thin Raspberry suckers.

Attend to regulating the growth of trees designed to be trained in any particular form, stopping useless shoots to throw more strength into those that are wanted. Newly planted trees should be kept mulched and watered at the roots during a continuance of dry weather.

Manure on vine borders should be removed at once. The only good it can do, is to prevent evaporation from the surface and keep the soil more uniformly moist. On the other hand, it prevents the sun from heating the soil. Remove it entirely, and fork the soil over a few inches deep, but not so deeply as to injure the roots. Liquid manure may be given with great advantage during the growth of the vines, and after the fruit is set, once or twice a week, according to the state of the weather.

The Flower Garden.

Trees and shrubs recently transplanted should be watered and immediately mulched with short half-decayed manure—the rare and choice kinds to be occasionally watered overhead mornings and evenings. Many kinds of evergreens may now be safely transplanted, taking the precaution to water them at first planting, and occasionally afterwards to well mulch the surface and to damp the foliage. We have sometimes found evergreens take root more freely now than when planted earlier in the spring. As showery weather generally occurs about the middle of the month, advantage should be taken of it to plant out the summer flowering plants, beginning with the hardier kinds, such as Verbenas, Petunias, &c., leaving Heliotropes and Scarlet Geraniums, and such as are susceptible of injury by frosts, until the beginning of the next month.

We will suppose that all the bedding-out plants are in a fine, healthy state; the next consideration will be the arrangement of the colors in the beds. As a principle in the arrangement, it is generally allowed that the various shades of orange and yellow will class well with the various purples and blues; whites being suitable with the blues, oranges and reds; whites, however, derange the effect of yellows, as also the violet shades; whilst the various red or rose-colored flowers are, as far as color is concerned, capable of forming a bed of themselves.

Roses, during any weather, will require a heavy soaking with water, and to be sprinkled overhead every evening—without which, in dry weather, the bloom will come very thin, and the growth greatly checked. Half measures in watering are of no use.

Pinks and Pansies should have a top-dressing of well decomposed stable manure, taking care to stir the surface of the soil before it is applied. Sow hardy annuals and Pansies for autumn flowering. Late propagated plants in frames should be watched and kept on growing slowly—the plants to be exposed to the weather as freely as circumstances will admit, but this should be done by degrees, and never to the extent of browning the foliage and drying up the tissues, and they should never be allowed to suffer from want of water.

Now is the time to establish a firm and even lawn. The roller and the scythe will be in frequent request, and much labor is involved in these operations, properly carried out.

The Greenhouse.

Look well to the stock of plants for summer and autumn decoration, and do not allow them to sustain any check through want of foot-room or neglect in watering. Fuchsias for late bloom must not be kept too warm, but kept in a moist, shady place, where they will grow much more freely than in a hot, dry atmosphere. The atmosphere of plant-houses can scarcely be kept too moist at this season, therefore sprinkle every available surface frequently. Look over running vines frequently and regulate their growth before the shoots become entangled, but avoid keeping them tied too closely, for they are never seen to advantage unless they are allowed to hang in a natural and graceful manner.

Profits of the Pear Crop.

P. T. Quinn, of Newark, N. J., in a paper read before the Pennsylvania Horticultural Society, furnishes a statement of some successful results in raising pears for market.—The orchard under his charge contains many trees planted seventeen years ago, and at different periods since that time. The original fifty selected varieties have been successively reduced to only six. Of these, the Duchesse d'Angouleme proves to be the most profitable. Nine years ago a single row, consisting of thirty trees of this sort, was selected and an accurate account kept of the sales. The following is his statement for seven successive years, to which we have appended a column showing the average product from each tree. The account commences when the trees were only eight years old—and one crop failed. They were originally dwarfs, but are supposed to have now thrown out roots from the pear:

1st crop, trees	8	years old	....	$120.00,	or	$4.00 per tree.
2d	do.	9	do.	....	139 41,	or	4 64	do.
3d	do.	10	do.	....	156.17,	or	5.20	do.
4th	do.	11	do.	....	201 28,	or	6 70	do.
5th	do.	12	do.	....	267.49,	or	8 90	do.
6th	do.	13	do.	....	310 20,	or	10.34	do.
7th (94 bu)		14	do.	....	705.00,	or	23.50	do.
Total.....					$1889.55		$63.28	do.

The distance of the trees asunder is stated to be ten feet—at the same rate there would be 435 on an acre—which, if yielding like the rest, would give a total for the seven years of $27,398, or $3914 annual average. The question occurs—if this result can be obtained from a whole row, why not for an acre?

The numerous disappointments which the planters of pear orchards have met with, are owing to the fact that they have begun all at once on a large scale, without understanding their trade. The three requisites for carrying on this trade successfully are, to ascertain by experiment on the ground, or in each locality, what sorts succeed the best; secondly, how to cultivate and prune them to the best advantage, and thirdly, how to pack well, and to find a proper market. In the instance we have quoted, fifty varieties were taken to begin with—it is, perhaps, not necessary to try so many now. Several years were occupied in determining the best. All these points, and many others, must be thoroughly learned before the owner can conduct his business to the best advantage. If a western wood-chopper should go into New York city, and engage in the wholesale silk trade, he would succeed no better than the farmer, who, with no experience, sets out a thousand pear trees for market. The former would, doubtless, come to the conclusion that the silk trade is very risky business, and the latter, that marketing pears is a humbug.—*Country Gent.*

☞The largest orchard in the United States is said to be the one owned by a Mr. Briggs, of Marysville, California, which contains one hundred and sixty acres of trees, all of the best varieties known.

An Essay on Colic and Bots in Horses.

Written for the "American Farmer" by G. H. DADD, V. S., Baltimore, Md.

The object of the author in offering this slight contribution to the veterinary literature of this country is, to correct a very popular error that has long been prevalent among horse-owners in regard to *colic* and *bots*. The fatal mistakes which have occurred, in consequence of a want of a correct knowledge on these subjects, have occasioned immense losses to husbandmen in the death of some of the finest horses ever reared in this country.

The error alluded to occurs in this way: a horse is suddenly attacked with acute abdominal pain, turns his head towards the flanks, anxiously regarding the seat of pain, and manifests other symptoms, which will hereafter be described, indicating *flatulent* colic, or perhaps *spasmodic* colic. The owner of the suffering animal not being able to diagnose or comprehend the nature of the disease, comes to the conclusion, or is informed by some person present, that the case is one of "bots;" and in consequence the horse must be drenched with some "*powerful remedy*" that will kill these parasites, but which too often succeeds in killing the horse instead of the bots—to which fact I can bear witness in many hundreds of cases that have come under my personal observation, and I here introduce a case as a sample of many others that might be recorded:

The subject was a Black Hawk stallion, valued at the sum of two thousand dollars; he was suddenly attacked with pain, evidently, from the description given me, indicating spasmodic colic. There being no veterinary surgeon in the vicinity, and the owner professing ignorance of the nature of the malady, had recourse to the opinion of some of his neighbors. They decided, unhesitatingly, that the horse had the "bots," and prescribed accordingly. The animal gradually grew worse, and I was summoned to see the case. On arriving at the stable I found the animal dead; I requested the privilege of an autopsy, which being granted, I opened the abdominal cavity; the stomach was removed and opened also, from which I removed the intestines of a chicken, (including the gizzard,) a large coagulum of blood about the size of a pint measure,* and about half a wine-glass full of pounded glass was washed from the semi-fluid contents of the stomach. I was informed that other remedies had been tried. The stomach was free from bots, but it, as well as some portions of the intestines, was highly inflamed and abraded from the presence and action of the glass. During the terrible struggles of the animal, in his paroxysms of pain, rupture had taken place, and I found a portion of bowel strangulated within the scrotum, which was almost black and in a state of mortification.

*This blood had been extracted from the jugular vein of another horse, and was given as a drench, and thus coagulated in the stomach of the dying animal.

I refrain from making any remarks on such outrageous treatment, but urge those who have the means and inclination, to lend a helping hand in establishing veterinary institutions of learning in this country, for the science therein to be taught is as valuable and charitable to nature's menials, for the purpose of ministering to their wants, relieving their aches and pains, and of prolonging their lives, as that practiced on the more noble of created life, and should we estimate veterinary science in exact ratio to the value and usefulness of the legion host of domestic animals that have been reared in this country, and those which, without regard to cost, have been imported from Europe, to whose welfare it directly contributes, then the reader will perceive that it is entitled to the consideration and support of American husbandmen.

We want schools and colleges in this country, where our young men can acquire an *American* veterinary education, so that in the coming era the farmers and horse-owners in the United States can employ the graduates of their own schools, endowed and fostered by their own enterprise and industry.

Some persons have an idea that the principles of veterinary science can only be acquired in Europe. This is a great mistake, for whether we prescribe for a horse or man, the theory and practice should be the same—hence we only have to substitute the word horse for man, and treat the former on the same intelligent basis that obtains in human medicine. The writer is aware that the people of this country have, hitherto, been so absorbed in promoting its growth and developing its resources, that there has been but little chance for great scientific achievement in veterinary matters, yet, within the few past years, some of the most learned of our profession, educated under the auspices of royalty, have been amazed at the progress made here

by a few industrious and devoted men, that never saw the inside of an Europe college.

As a national affair, therefore, it should be the pride of every American husbandman to put his shoulder to the wheel for the purpose just indicated, for such an enterprise will surely redound to the honor and pride of the nation. What the American people have accomplished, during the past few years, in rendering other sciences popular, is proof positive of what shall occur when the current of investigation is directed to the science of veterinary medicine and surgery.

With these preliminary remarks, the reader's attention is now directed to the subject of colic and bots.

The term *colic* is used to designate a disease of very frequent occurrence, both among horses and members of the human family; and the reader, if he has ever been the subject of an attack of the same, and has experienced the excruciating torment which sometimes attends a severe attack, can readily sympathise with a poor horse when in a similar condition. There is no disease with which the writer is acquainted that is so sudden in its attack or, for the time being, so distressingly painful as this malady. It is sometimes accompanied with delirium, so that the unfortunate creature will, in falling, or while on the floor, mutilate his body by kicking with reckless ferocity, as if aiming to obtain relief in his own destruction, and he often does succeed in hastening death either by rupture or entanglement of the intestines.

NATURE OF COLIC.

There are two forms of *colic* to which horses are subject: one is of a *spasmodic* character, the other is characterized by distension of the abdomen with gas, and is known as *flatulent* colic. Spasmodic colic is known to horsemen as *stoppage*, gripes, cramp, &c. The term stoppage has been applied from the fact that, for a time, the patient passes neither fæces nor urine, although he makes desperate efforts to do so, and it often happens that the neck of the bladder, as well as a portion of the intestines, are spasmodically contracted.

It is only necessary to know something of the anatomical structure of the intestines, and we then readily perceive how and by what means the spasm occurs. The intestinal tube of the horse, which is about ninety feet in length, is composed of external, internal and central coats. The central portion is composed of muscular fibres of two orders, one of which is circular; the other, longitudinal. Should spasm or contraction occur in the longitudinal fibres, the bowel is shortened; if it occur in the circular fibres, the calibre of intestine is proportionately decreased, and sometimes, in tonic spasm, complete stricture of the intestine is the result, so that the *stoppage* is complete. On examining horses that die in this state, we find that the intestines have a sort of knotted appearance, hence the term "*gut-tie.*"

FLATULENT COLIC, which is by far the most common affection, differs so essentially from spasmodic colic that the one can easily be distinguished from the other, for its name, *flatulent*, indicates the presence of gas or flatus, and the abdomen is distended by means of the same. On applying the ear to the abdominal region, a rumbling sound is heard, and this is proof positive that the intestines are occupied by gas; and it often happens that while making an examination the horse passes gas from the anus or eructates it from the mouth, hence there can be no mistake about the nature of the case. In some cases the gas goes on accumulating in the large intestines until rupture occurs; the animal then dies.

SYMPTOMS OF SPASMODIC COLIC.

It may be proper to bear in mind that the kind of horses most subject to this form of colic are those of the nervous temperament; quick and active in their motions and gait; having wirey muscles, fine pointed and smooth ears, which are constantly in motion; with eyes that are bright and seldom at rest. The body of such an animal is usually compact, and the hair is of a finer texture than that of the coarse built horse. Such horses are liable at any time—in the stable, on the road, or at grass, to be attacked with this disease, to which, by virtue of their peculiarity of constitution, or predisposition, they are liable, whenever the ordinary exciting causes are brought to bear upon them, which deranges the nervous system.

In the early stage, the animal becomes uneasy, evidently from abdominal pain, and commences to paw the ground or floor with his fore-feet; he soon gets down, and should there be space sufficient, he commences to roll from side to side, often remaining a short time on his back, in which posture he seems to obtain temporary relief; sometimes as quick as

thought he is on his legs again; gives his body a shake, turns his head anxiously towards the flank; then again he goes down, without regard to consequences, and performs the rolling feat again. Occasionally he gets into a crouching attitude, gathers the limbs under the body, until the pain becomes so severe that he must shift his position. At this time the body is bedewed with perspiration, the respirations are hurried, the pulse is wirey, and the eyes become glassy. He will now stand in the position of a horse when in the act of urinating. Should no relief be obtained, the animal goes into convulsions, mortification of the intestines ensues, and death ends the scene. These are the most marked symptoms of spasmodic colic; the patient occasionally has periods of ease, but these gradually grow shorter as the case runs on to a fatal termination, but as soon as mortification ensues all pain ceases, because that is the death of the part, and the death of the horse follows.

SYMPTOMS OF FLATULENT COLIC.

It has already been remarked that this disease is marked by flatulency—distension of the abdomen. At the very beginning of the malady gas is present, and can be detected by percussing or striking the abdomen with the fingers, when a tympanitic or drum-like sound is elicited; the animal is evidently in great pain, looking often towards the seat of distension, and strives to get into such positions whereby he can obtain the most relief; now he rests on his belly, at other times lays flat on his side, but prefers to stand or walk, for when the distension is great it interfers with respiration, hence he is unwilling to get down until severe pain compels him. If properly treated, this disease usually terminates favorably; its diagnostic symptom is windy distension of the abdomen.

ON THE CAUSES OF COLIC.

Various are the causes assigned as productive of both forms of colic. It is supposed that hearty draughts of cold water, when the animal is exhausted or in a profuse perspiration, is a potent cause. This may be the case, yet it is a well known fact that no people pay more attention to watering horses than the English grooms, and it is customary, when a horse is taken from his home to a distant race-course, to transport sufficient water with him, of which he has been accustomed to drink, to last until the races are over, such a dread have these men of what they term "strange water," yet it is well known that colic, in both its forms, is very prevalent among such horses. It is possible that too much is allowed; it may be the quantity, and not the quality, that affects the horse.

[To be continued.]

Agricultural Laborers of Prussia.

M. Emile de Laveleye has just contributed an article to the *Revue des Deux Mondes*, in which an interesting account is given of the progress made by Prussia during fifty years of peace. Writing on agriculture, he points out that nearly all the land-owners cultivate their own estates; except for detached portions, renting is the exception. They are, therefore, retained in the country by the care of their own interests, for nothing more imperiously requires the eye of a master than rural industry. It is true they are aided by a class of employees who are not found in any other country. They are educated young men belonging to families in a good position, often just leaving an agricultural college, who remain for a certain time on some large estate to initiate themselves in the practical direction of one of their own. This novitiate is an ancient custom still preserved in many trades. Thus, frequently, the son of a rich hotel-keeper will not hesitate to enter another hotel as butler or waiter (Kellner) to be initiated into all the details of the service over which he will one day have to preside. When any one visits the farms (Rittergutter) he is astonished to see as superintendent the son of a banker, a baron, or a rich land-owner. These young people drive a cart or guide the plough. At noon they return, groom their horses, and then go and dress themselves and dine at the owner's table, to whom they are not inferior, either in instruction, birth or manners. After the meal, they resume their working dress and return, without any false shame, to their rustic occupation. Thus we find in feudal Prussia a trait of manners suited to the democratic society of the United States, and which hereafter will become general. In France, in England especially, a young man of the upper class would believe his dignity compromised in performing the work of a farm-laborer.—*Paris Correspt of Land and Water.*

☞Let another's passion be a lecture to thy reason.

For the "American Farmer."

The Fair at New Orleans.

[Concluded.]

Specimens of the "Victor" Cane Mill and Cook's Patent Sugar Evaporator, from Messrs. Blymyer, Norton & Co., of Cincinnati, attracted much attention. These mills and evaporators are made of all sizes, and adapted to horse or steam power. The process of sugar-making was gone through with on the grounds with most satisfactory results. A mill to be worked by a single mule and capable of expressing the juice for about 300 pounds of sugar per day, costs but $75. First premium awarded.

A Steam Plough, patented by Mr. Fowler, and manufactured at Leeds, England, was in operation daily during the fair. A larger plough, from the same manufactory, (imported by Longstreet, Owen & Co., N. O.) was exhibited at the previous fair, and afterwards sold to Gen. John G. Walker, of the late C. S. A., who is said to have had it in successful and profitable operation in Southern Illinois, performing with it a large amount of contract work in ploughing, ditching, etc. The plough on exhibition this year (imported by Owen Bros., successors to Longstreet, Owen & Co.) consists of two steam engines, capable of propelling themselves over ordinary roads with ease. They run upon four broad iron wheels, having projections at intervals, to take hold of the ground and prevent the wheels from slipping. The plough consists of a wood and iron framework, V shaped, (only with a much greater angle,) on which are set numerous shares, those on the different angles pointing in opposite directions. At each end of the plough a wire rope is attached and carried to the two engines. There is a seat upon the plough at each end, and a steering-wheel, by which it may be directed out of its course sufficiently to avoid stumps or other obstructions. When in motion, one set of shares is in use; the other, pointing the reverse way, is raised clear of the ground. In returning, this set is brought into use, thus avoiding the necessity of turning the plough. It makes four furrows at the same time. Accompanied by a practical farmer we examined a portion of the ploughed ground, and he expressed the opinion that the work was very well done, considering the nature of the soil—a hard, tenacious clay. The sod was well turned, though the furrows did not appear to be of great depth. I afterwards learned that this was the objection raised by another planter, who estimated the depth of the furrows at from 6 to 7 inches. The general opinion seemed to be that this mode of ploughing was not practicable. This is the usual reception accorded to all new labor-saving machines. In this instance, however, there is ample proof of practicability. These ploughs are largely used in India and in Egypt, necessarily profitably and successfully, or their use would not be continued. Of course they cannot be used everywhere and by every one, but in some localities they may be found useful and profitable. At a recent meeting of the American Institute, in N. York—we quote from the *Tribune's* report—"the subject of steam ploughs was called up, and Mr. Blanchard illustrated a plan of ploughs with reversible shares, which should be drawn back and forth by an engine, stationary while at work, but locomotive for the purpose of transportation. Dr. Bradley thought that steam ploughs had been thoroughly tried in every possible combination, and had nowhere proved sufficiently remunerative. He thought that they would never extensively supersede the use of animal power. The President said that in England two establishments are engaged in the manufacture of steam ploughs; each has made and sold about 1000 machines. During our late war, when strenuous efforts were made to increase the production of cotton in India, many of these implements were sent there, and to-day probably more steam ploughs are at work in India than in England. A Mr. Willard, who some time ago presented to the club a model of a steam plough, subsequently went to Chicago and engaged in the manufacture of the machine, and has met with decided success. Mr. Johnson suggested as a substitute for ploughing, a method of blowing up the ground, either with steam or compressed air."

In the manufacture of soap there was active competition. Two large manufacturers of N. York were liberally represented, giving samples of their wares to all the lady visiters. McRoberts & Dick, N. O., exhibited a single tablet, or cake, weighing 2000 pounds, on which stood a large statue of Diana. Kelley, of N. O., a monument of variegated soaps, sixteen feet high. Some doors, sashes and blinds of the native cypress (from Roberts & Co., of the Louisiana Sash Factory, N. O.) claim attention as home manufactures. They

were without paint or varnish, beautifully finished, and were generally admired. New Orleans has a well deserved reputation for its shoes of all kinds; and one firm made a fine display, from boots for the ruder sex down to the tiny shoe of the infant. Candies, cordials, and bitters, all of home manufacture, were in abundance. New patents for roofing, for paving, for stopping crevasses, were shown by models. For the remainder of the varied assortment of miscellaneous articles we must leave the reader to draw upon his imagination.

The department of British Honduras merits some attention. There was always a crowd about it; for this is the "promised land" to which so many of the Southern people are looking. There they hope to find peace and plenty and a refuge from despotism. Many I fear will go to meet with disappointment. Let me repeat here the advice, often reiterated, by a Southern gentleman, for several years a resident of Honduras. He tells intending immigrants that they must bring with them supplies and money to carry them through at least one year, and they must expect to work hard. There is no field for professional men, or for those who live by their wits. You have to win your bread by the sweat of your brow, there, as well as here. It is somewhat doubtful whether there is anything to be gained by a voluntary exile in British Honduras. But to the department of that country at the fair. There were models in wax of all the tropical fruits, samples of rice, cane, cotton, corn, of various liquors, cordials, jellies and preserves, a model of a canoe, shell-forts, India rubber, yams, cassava root and cassava bread, and a host of other things, tedious to enumerate, but interesting to look at. A collection of the native woods, some fifty or more varieties, embracing, beside mahogany, cedar, logwood, ironwood, and others well known, many quite unknown and very beautiful. The specimens were carefully prepared, showing the wood in a polished and unpolished state, the bark, the heart and the grain; and were much handled and discussed. This display will doubtless give an impetus to emigration, as it was intended to do.

In the Rotunda of the Octagon building were pianos, (one of New Orleans manufacture,) sewing machines, embroidery and fancy work, jewelry and silverware of home manufacture, very elegant and massive, statuary, etc. In the gallery were photographs, drawings and paintings of all descriptions; some very good, and some, as usual, very bad.

The ramie plant, the proposed substitute for cotton, was to be seen on the grounds in all its stages, from the growing plant to the cloth manufactured from its fibre. This plant comes from Mexico, was introduced here about a year ago, and has been successfully propagated. Colonel Dennett, editor of the *Planters' Banner*, (Franklin, La.,) a shrewd and practical man, says of this plant:

"We saw the ramie machine work on okra stalks. It worked out the fibre handsomely and will doubtless work the ramie fibre much better, since the stalks of the latter is more brittle and the fibre is stronger. The fibre of the ramie is as white as snow, and nearly as fine as silk, and in length it is equal to the Sisal hemp. It is said that three cuttings have been made from it below the city this year. It increases, it is said, fifty or more roots from one in a year, but it takes possession of the ground to the depth of two feet or more, and some believe that it will be as difficult to eradicate as cocoa. Once planted, it continues to rattoon three or four cuttings a year, about one hundred and fifty pounds clear fibre at each cutting, and the article sells in England at fifty cents per pound.

We saw a shirt made of the ramie fibre; it was manufactured in Massachusetts. The quality of the article was equal to the finest linen, and has something of a silky texture. We also saw a beautiful handkerchief, a mixture of silk and ramie. It was almost equal to pure silk.

We would not advise any one to go into this ramie culture recklessly. It appears to promise success, but hundreds of other things have promised equally as well and have proved failures. Still, we believe the ramie plant will prove a success. Any one by planting from ten to fifty plants in good soil will, in a few years, have roots enough to plant a large surface. Another year will test the merits of this plant pretty well, and two years will decide its merits so that all may decide whether to engage largely in its cultivation or not. It is not worth while to run crazy over the new hobby."

Though the attendance at this fair was not so large, owing to causes already mentioned, as at the previous fair, in practical results it will doubtless accomplish much more. If

fewer went out of mere curiosity, or simply in search of amusement, more went to learn with a desire to benefit by inspection of the various articles on exhibition. That good fruits will result from this we are fully convinced; and we look forward to the increased usefulness of the M. and A. Fair Association, year by year.

CHARLES A. PILSBURY.

Greensand Marl as a Manure.

The marl of the State of Maryland, for the purpose of examination into their composition or value, may be conveniently classed as follows:

1. Containing shells or carbonate of lime in considerable amount.

2. Containing a preponderance of the true greensand element—glauconite.

That is, these marls may be valuable either as containing potash, in the glauconite constituent, or carbonate of lime derived from the presence of the fossil shells. Those varieties which contain the glauconite are the most valuable, and the nearer the approach of those to the standard of the New Jersey marls, as given in the last communication, the more desirable are they as manures, since potash is more desirable as a manure element than lime, because more costly when purchased by the farmer, and not usually found in any amount in mineral substances used as manure, while, on the other hand, lime carbonate can be derived from many sources and at comparatively cheap rates. The greensand particles being much heavier than the calciums or other constitutents of the marl, are easily separated by washing, when the relative amounts of them may be determined Thus, a specimen of marl from near Marlborough, Maryland, furnished by washing—

Dark greensand grains	45 79
Shelly particles and clay	54.21
	100.00

Now many agriculturists would consider this marl rich in possessing the lime element so abundant, whereas its real value is in the amount of greensand, which, in the proportion above, would yield between five and six per cent. of potash, estimated in an uncombined form; five per cent. of this form of potash would represent eight and one-third per cent. of pure carbonate potash, so that the above amount of greensand grains would yield in 45.7 pounds about five pound of pure carbonate, or just 100 pounds of the same pure salt to the ton of marl as now constituted. As the shelly particles were found to yield forty-five per cent. of the carbonate of lime, each ton would yield nearly 900 pounds of mild lime. The analysis would thus show that the valuable ingredients in one ton of this marl are 100 pounds of pure carbonate potash and 900 pounds of carbonate of lime.

In a ton of farm manure (cow) there are obtainable not quite three pounds of carbonate of potash, so that the amount of alkali afforded by this marl is greatly superior to that given by cow manure; and as an average crop of potatoes raised on one acre removes from the soil about 102 pounds of carbonate of potash, there is in one ton of this marl nearly a sufficient amount of that salt to replace what the potato removed, supposing the manure to be evenly spread over the whole surface of the ground.

In the lower counties of Maryland the marl beds extend and cross the Potomac into Virginia, near Aquia Creek, along which into the interior it may be traced in Stafford county. The following is the constitution of a marl from the Maryland side of the river at that point. By elutriation, or washing, in 100 parts of dry matter:

Fine yellow clay	48.00
Calcareous matter, (shells)	18.00
Sand	10.00
Greensand marl, impure	24.00
	100.00

And by chemical analysis it yielded in 100 parts:

Quarts and fine sand	58.5
Alumina and peroxide of iron	9.2
Carbonate of lime	17.2
Cabonate of magnesia, traces.	
Soluble saline matter containing ¾ of one per cent. of potash	0.3
Moisture and loss	11.8
	100.0

The proportion of potash in one ton of this marl is about twenty pounds of pure carbonate, corresponding to about twelve per cent. of pure glauconite in the marl. The carbonate of lime being seventeen per cent., the total quantity per ton of these two elements would be 20 pounds of pure carbonate of potash and 170 pounds of carbonate of lime. This marl, therefore, has one-fifth the money value of the one from near Marlborough.—*Monthly Report of Department of Agriculture.*

Cooking Food for Animals.

The New-York Agricultural Society, during its exhibitions, wastes no time. The evenings are spent in discussing questions relating to the momentous business of which it is in part the representative and promoter. By this means much valuable information is disseminated, coming as it does from some of the ablest farmers in the country. At one of these discussions at the late fair at Buffalo, among the subjects taken up was that of cooking food for domestic animals, and was disposed of in the following manner, as reported in the *Country Gentleman:*

A. B. Conger in the chair.—E. W. Stewart, of North Evans, Erie county, opened the discussion, the subject being the cutting and cooking of food for stock. The speaker said the importance of the subject was shown by the fact that more food is required for the domestic animals of the country, than for the whole population. He furnished the reasons, derived from long and extended experiment, to show the advantage of cutting fodder. If an animal has to masticate 30 pounds of hay per day, it is attended with much labor, and if we can assist this labor by machinery, an important point is gained. He has fed from ten to fifty cattle, and found the food was more completely eaten without any waste, when cut. Cooking rendered food soft and in a condition to be eaten, even in a more perfect manner than by cutting. He cited the analogous fact that woody fibre in straw and wood, was softened to a perfect pulp by steam under a high pressure, in the manufacture of fine paper. He had found by experiment, that two bushels of steamed hay, with nothing added but water, was equal to three bushels of unsteamed; and after repeated trials with different animals, the fact was proved that the animals kept in better order and were better satisfied on the two steamed, than on three unsteamed. Many experiments had shown, that for feeding swine, the value of corn was about doubled, and in no case had the reported gain been less that one-half more. If it is profitable to feed a few animals on cooked food, it is more profitable to feed a larger number. To apply steam to *dry* hay, only dried or burned it, and made it worse—it should be first wet—and this is the reason that some have failed in steaming. There should be two gallons of water to every five bushels. Another advantage in steaming was, in mixing hay and straw together, which should be done before the operation—and he had found this mixture thus treated to be fully equal to unsteamed clear hay. Bean straw and pea straw if cut soon enough, is still better, and may be thus mixed, and will prove extremely valuable. The manure from animals fed on bean and pea straw had proved rich, and better than straw manure. He had found by a long series of experiments, that two quarts of "middlings" was equal to one quart of Indian meal—and that wheat bran (which contains much gluten), was one of the most valuable kinds of food, if properly prepared. Steamed fodder was similar in its character to fresh pasture; and horses that had been diseased by coughs, had been cured by such food.

As regards the *expense* of cooking food, he had found that one man could cook enough for fifty cattle, and he could take care of them with a little additional assistance. Water is sprinkled on the dry fodder with a watering-pot—on a large scale it might be showered from a reservoir. The bran or meal, if added, is then well mixed with it, and the whole subjected to steaming. Roots when fed in winter, should be steamed, and are much improved in this way as fodder. An apparatus for steaming for a moderate number of animals, might be made for fifty dollars. If not to be subjected to pressure, a long pan might be set on an arch, and the steam-box added. But the best way is to have a boiler with a steam-pipe, connected with the steam-box, so that the pressure could be given, which softens the food more perfectly. He thought an apparatus for a hundred head of cattle might be made for two hundred and fifty dollars.

Another great advantage of steaming is the superior character of the manure, which is finer and softer than common coarse lumpy manure; and such manure can be applied at once to the land, as well as fine and fermented manure, and can be distributed evenly.

A. T. Brooks, of Wyoming county, inquired if sheep were as much benefitted by cooking food as cattle. Mr. Stewart replied that he had purchased 25 sheep for the purpose of testing this experiment. They refused it entirely the first day, ate it better the second, and the third and afterward, consumed it greedily. They improved in condition and increased in weight while fed upon it. L. F. Allen, of Black Rock, inquired why, if stomachs where alike in their action on food, all

animals should not be alike benefitted by cooking? He described the wasteful mode at the West, where corn is drawn out and fed, stalks and all, to cattle—much of the corn passes through whole, which is saved by turning in swine to pick out the unbroken grains of corn. He had inquired of Western men how much corn was required to fatten cattle —some answered fifty bushels, others seventy-five, and others again a hundred bushels.—Some farmers thought an acre of corn would do. Probably this difference was owing to a difference in weather and other circumstances; but good shelter and good preparation of food would doubtless far lessen the amount. He thought the same pains and use of machinery to prepare food for animals should be employed, as in manufactories.

G. Geddes, of Syracuse, said there was no branch of farming that was less understood and promised more advantages, than the preparation of food. He had thoroughly proved years ago that cooking, independently of grinding, at least doubled the value of food. He had published this to the world, and yet what notice had the world taken of it? A. B. Dickinson had said that a man who knew how to winter a herd of animals properly, was so rare a person that he was fit for President of the United States. He thought that some men got to be President who knew little about feeding animals.

George Moore, of Erie county, said he had fed 200 sheep on cooked food, and he had fully satisfied himself that the value of food was tripled by cooking. He steamed over night, and found the food warm next morning. He then steamed for dinner, and after dinner steamed for supper. G. Geddes had fed cooked food to hogs, as hot as it could be, and they soon found out how to manage it, although a little burned at the first trial. Mr. Stewart had found that his animals preferred warm food to cold, and ate it better; if the box was kept covered it would keep warm two days in mass. Prof. Horsfall, of England, had said after long experience, that he could not keep cows profitably without steaming. The failures had come from attempting to cook it dry. Another gentleman, name not heard, had used Prindle's steamer with great success.

☞ This is a good time to cut bushes along the fences and in the pasture. Time thus spent is well spent.

Co-Operative Farming in England.

That great economical reform of our day, the co-operative principle, has presented a new phase in England in the establishment of a co-operative society of a novel kind, called the Agricultural and Horticultural Association, the first meeting of which was held some three weeks ago at Islington. The managing director, Mr. Groning, made a report in which he said the society had so far accomplished everything which it had undertaken, and explained the principle of their association as a limited share capital, by which all liabilities were limited to the amount of £1 per share. He said the members were to be supplied with the best description of implements, manures, cattle food, seeds, &c., at trade prices, without the intervention of agent' profits; but, in addition to their securing good and unadulterated articles, the' whole of the profits, minus the small charge for working expences, which did not average more than four per cent., would find their way into the pockets of the members. They would receive a dividend of seven and a half per cent, on the capital and the profits upon their purchases minus the working expences, the amount returned in the average of existing co-operative associations being six-sevenths of the profits. At present the manufacturers allowed a commission of something like twenty per cent, to the agents who sold the goods, and, in the event of the farmers availing themselves of the advantages of agricultural co-operation, the commission would be saved.

Mr. Thomas Hughes, member of Parliament, made a speech in which, while not pretending to decide whether the farmers would find it to their advantage to adopt the co-operative principle, he said it had done a good service to trade in preventing adulteration, and frauds in measurement, and had enabled him to save from twelve to fifteen per cent, in his own household expences. Mr. Groning, in answer to a question, said the amount of capital invested in co-operative enterprises in England was £1,,046,310; the amount lent on deposit, £118,023; the aggregate profit derived from such enterprises last year, £372,317, and the average return to the individual stockholder thirty-six per cent. It was voted to press the arguments for co-operation upon the attention of the Farmers' Club and similar bodies.—*Baltimore Sun.*

Stabler Patent Beef-Packing Company.

A company with the above name has been started at Indianola, Texas, and their object is one of great interest to Texas, particularly the stock-raising portion of the State. We had a conversation with the patentee, Mr. Francis Stabler, of Baltimore, Md., and from him we have learned the particulars of the process. The beef is cut up into steaks, the bone taken out, a small quantity of salt put on, and allowed to stand three hours, to draw part of the moisture from the meat. It is then put into cans, weighing from fifteen to fifty pounds, which cans are put into an iron box, which can be made air-tight by the quick motion of a screw. The air is then exhausted by means of a column of water, and carbonic acid gas introduced in the place of the air, when the cans are soldered up and are ready for shipment to any part of the world, taking six minutes to each one hundred and sixty pounds of meat. This process possesses this decided advantage, that by two hours' soaking in water you can have as good a broiled steak of Texas beef, in any part of the world, as though you were on the mesquite range of Texas, and at a less price to the consumer than the salt beef of the Western States of Ohio, Indiana, and Illinois, which has had the juices soaked out by the brine in which it is packed. Carbonic acid gas, that is used in this process, is the same that is in daily use in all families. It is owing to its presence that our bread gets its lightness; our ale foams from its presence; and when indulging in the more extravagant luxury of a glass of champagne, we reap our reward by the sparkle *this gas* gives; for without it, it is stale and flat. This gas will not support combustion, being free from oxygen, and hence its substitution for air, the oxygen of which causes the meat to decompose.

Mr. Stabler sent to South America, in February, 1866, to test this process on the meat of that country, and now (November, 1866) has some of the South American meat in Baltimore that was exposed on the deck of the vessel for a week in April, while crossing the equator, and kept in Baltimore during the summer, still retaining all the properties of fresh beef. With a view of testing the process and proving its power, he put up part of a beef with the animal heat in it, while the thermometer was at eighty-five degrees, having the meat in cans and sitting in the sun in fifty minutes from the time the animal was killed. Four months of exposure to the sun has not impaired its qualities, being equally as good as that put up without the animal heat.

Upon introducing the matter to the Navy Department, they appointed a board at the Brooklyn Navy Yard to examine it, and reported that they "found the properties of the meat remarkably well preserved—*better than any other they had seen; that they had cooked it in various ways, and in all* it was *juicy, tender, and palatable.*" The firm now have a contract with the Navy Department for supplying a portion of the beef issued in the navy; and from the advantage they have in packing in Texas, where the beef is of much superior quality and prices so low, must increase the proportion to other kinds of beef. They are also filling large orders for beef for planters through the Southern States, and, owing to their being able to furnish *fresh beef*, can bring the vast herds of Texas to the door of all the beef-eating world, which will eventually have the effect to make stock-raising one of the most profitable branches of our home industry. No ice is needed in this process, meat being put up every month during last summer and spring without ice, the only care necessary being to put it up as soon after it is killed as will insure its being sound.—*Texas Almanac.*

Glanders.

The Academy of Sciences has received a paper from Dr. Guyon on the transmission of glanders from the horse to man and conversely. Some years ago a captain of artillery at Algiers was entrusted with the care of the diseased horses and mules of his regiment, and took advantage of the circumstance to devote particular care to a few of his own horses attacked with farcy. During this time he fell sick, and after several months' treatment at home was taken to the military hospital in a dangerous state. The medical practitioners who attended him were unable to discover the nature of his malady until within a few days of his death, when it turned out to be a well-characterized case of glanders. The blood and morbid humors of the dead body were innoculated on two mares, a horse, and a mule, four animals unfit for service, and placed at the disposal of the physicians by the military authorities. The disorder was reproduced on the horse, the mule,

and on one of the two mares; perhaps it would have made its appearance on the other likewise had the latter not been killed too soon. A long while after all these occurrences, a military physician who had helped to dissect the captain's body, and had had his share in the above mentioned experiments, gradually declined in health. He had returned to France by that time, and was living in easy circumstances. His illness was long, and accompanied by symptoms *suigenris*, unknown in human pathology, such as glandular swellings with suppurating eruptions on various parts of the body, a peculiar furgidity of the nose, and an abundant and daily increasing suppuration of its mucous membrane. It was not until the nature of the disorder had become quite patent that the unfortunate physician recollected his having pricked himself very slightly while dissecting the captain's body. The disease ended in death, eleven years after the infliction of the wound. It follows that the affection called glanders, peculiar to horses, is transmissible to man, and from him to both man and beast.—*Western Ruralist.*

Larva in the Skin.

These annoyances are another result of turning an animal out to grass, the fly, whence the trouble is derived, never entering the stable. The insect rejoices in the freedom of the field; and man by turning out his horse finds the creature a fitting spot for the deposit of its eggs. This body is carefully deposited upon the back or sides. The warmth of the animal hatches the larva; no sooner is it endowed with life, than, with the instinct of its kind, it burrows into the skin. The integument of the horse, however thick it may appear, is soon pierced by the active little maggot, which, thus snugly housed, retains its lodging until the following spring. During the winter, a small lump denotes its abiding place; but as the second summer progresses, a tolerably large abscess is instituted.

The interior of the abscess, of course, contains pus. Upon that secretion the insect lives and thrives. The inhabitant of a warm abode, surrounded by its food, the early period of life, no doubt, is, for an inactive being, highly agreeable.

Such swellings are acutely painful, and prove the source of much annoyance. They mostly occur upon the back. The saddle cannot be laid on one of these tumors; and, as the spine supports much of the harness, the proprietor has the vexation of beholding his horse rendered perfectly useless; for suffering, should service be exacted, occasions the creature to excite displeasure; besides the pranks, thus provoked by torture, often continue after the cause has been removed.

Upon the summit of the abscess appears a black spot. It is at this spot the larva receives the air needed to support a dormant existence. This fact being known to certain people, the knowledge is employed to destroy the parasite. The swelling is first slightly greased, then a drop of melted tallow is let fall upon the breathing place. By such means, the insect is effectually suffocated, and assuredly dies.

Others employ a darning needle, as the instrument of execution. The needle is thrust through the central spot into the swelling, for three-eighths of an inch. The larva, thereby, is pierced, and the life, certainly, is sacrificed.

Neither method occasions at the time the slightest pain to the horse, and therefore may by some persons be esteemed highly humane; but, in the end, such plans of cure prove the very reverse. In either case the maggot dies; but the business, unfortunately, is only rendered worse by killing the source of evil. The dead body putrefies. A foreign and corrupting substance, beneath the skin, may enlarge the abscess to many times its original dimensions. After all, the system has to cast forth the irritating matter; and for that purpose inflammation, with its attendant fever, must be perfected. Much suffering is thus occasioned, and the proprietor is, for several weeks, forced to forego the employment of a valuable servant.

The safest, the surest, and the quickest manner of eradicating these parasites, is with the point of a lancet, slightly to enlarge the central opening; and then with the finger and thumb applied on either side of the swelling, to squeeze out the intruder. The abscess rapidly disappears; and it only requires a few dabblings with the solution of chloride of zinc, one grain to the ounce, to close the wound. However, the best manner to avoid such annoyances, is not to endeavor at saving money, by treating a domesticated animal as though it were an untamed quadruped.—*Turf, Field and Farm.*

Oysters and Canned Fruits.

This trade has been in fair activity throughout the past year. According to the Baltimore Price Current, the number of houses prosecuting it now reaches about seventy-three, of which some forty are strictly in the packing trade. The hands employed equal probably 5,000 of both sexes in the various departments of shucking, packing, peeling, preserving, &c. Six to eight millions bushels of oysters are consumed, one-third of which are packed raw, and the balance hermetically sealed. The cans required for these reach about three to four million, of half to one gallon each, and require say 300,000 cases to pack them. The balance of the oysters, say some 4,000,000 bushels, are put up in hermetically sealed cans of 1, 2 and 3 pounds each, of which during the active season some 80 to 100,000 cans are daily packed, so that 12 to 16,000,000 of cans are required for this trade annually. It is estimated that some $14,000,000 to $16,000,000 are invested in this interest in and around Baltimore, and that the annual product is worth some $6,000,000 to $7,000,000. The number of vessels engaged in bringing these bivalves, fruits, and vegetables to the city is very great, and we estimate it at some 1,500 to 1,600, and these alone give employment to some 6,000 persons. The prospect is that these canned goods will continue to increase in production here, and the already prodigious proportions of the interest will be largely increased. The United States Commissary Department buy largely of these now for army supplies, and other points of consumption are to the West and far West, the North and Southwest. But little goes now to California, once the great market for these goods.

Profits of Poultry.

Nothing which the farmer produces is of quicker sale than eggs and poultry. The prices which he receives therefor are in the main remunerative; the labor incurred is light and agreeable, and can be performed by the junior members of his family. The poultry yard produces food which is highly palatable and nutritious at all seasons, and in this respect is hardly equalled by any other department of the farm. Is it not worth while, then, to bestow more care and skill in managing the poultry? Left to themselves, half their products are often wasted, and half the year they are non-layers. In winter they need simply warmth, light and sunshine, clean, roomy quarters, and plenty of food. Every day they will pay for this. In the summer they want range, fresh earth; shade water, seclusion, and protection from vermin. An abundance of eggs and broods of plump chickens, either for market or the farmer's own table will result from this care. It is not feasible to carry on the poultry business on an enormous scale. Many have tried it and failed; but every farmer should make a couple of hundred dollars' worth of their products yearly. That, at least, can be done with profit and pleasure. It is a business adapted for the boys and girls, and they will speedily take a lively interest in it if only proper encouragement is given.—*Ex.*

Lice.

These parasites are the consequences natural to the states of filth and debility. Insects, which have been mistaken for lice, sometimes infest large stables, and almost drive the horses frantic, with the itching they provoke. Application after application, intended to destroy lice is made use of. Every recognized source of contagion is exterminated. Internal as well as external medicine is restored to, but every endeavour to remove the annoyance signally fails. The horses are fat, and feed upon the best; yet they seem to breed the parasites peculiar to the opposite condition. At last some one points to the hen roost which leans against the stable. That building is pulled down, and with it the nuisance disappears.

It may to the reader appear strange, that the application which killed lice did not destroy the insects driven from the fowls. Those parasites, which were upon the horse, doubtless perished; but the dressing being washed off, the pests came again and again, being supplied by the source of all the mischief.

Insects breathe through the skin. On that account, a hornet is more readily destroyed by dropping a little oil upon the exterior surface, than by immersing the head in hydrocyanic acid. All, therefore, requisite for the removal of lice, is smearing the entire body with any cheap oil or grease. But when the skin is washed, the business is not ended, Generally the horse troubled with lice, is hide-bound, and may have various other affections, derived from the debility which generated the parasite. —*Turf, Field and Farm.*

Orchard Grass For Pasture.

Chas. L. Flint, in his work on Grasses, says of Orchard Grass (*Dactylis glomerata*):

"This is one of the most valuable and widely-known of all the pasture grasses. It is common to every country in Europe, to the north of Africa, and to Asia, as well as to America. Its culture was introduced into England from Virginia, where it had been cultivated some years previously, in 1764. It forms one of the most common grasses of English natural pastures, on rich, deep, moist soils. It became, soon after its introduction into England, an object of special agricultural interest among cattle feeders, having been found to be exceedingly palatable to stock of all kinds. Its rapidity of growth, the luxuriance of its aftermath, and its power of enduring the cropping of cattle, commend it highly to the farmer's care, especially as a pasture grass.

"As it blossoms earlier than Timothy, and about the time of red clover, it makes an admirable mixture with that plant, to cut in the blossom and cure for hay. As a pasture grass it should be fed close, both to prevent its forming thick tufts, and to prevent its running to seed, when it loses a large proportion of its nutritive matter, and becomes hard and wiry. All kinds of stock eat it greedily when green.

"Judge Buel said of it, 'I should prefer it to almost every other grass, and cows are very fond of it.' Elsewhere he says: 'The American Cock's-foot, or Orchard Grass, is one of the most abiding grasses we have. It is probably better adapted than any other grass, to sow with clover and other seeds for permanent pasture, or for hay, as it is fit to cut with clover, and grows remarkably quick when cropped by cattle. Five or six days' growth in summer suffices to give a good bite. Its good properties consist in its early and rapid growth, and its resistance of drought; but all agree that it should be closely cropped. Sheep will pass over every other grass to feed upon it. If suffered to grow long without being cropped, it becomes coarse and harsh. Colonel Powell (a late eminent farmer of Pennsylvania) after growing it ten years, declares that it produces more pasturage than any other grass he has seen in America. On being fed very close, it has produced good pasture, after remaining five days at rest. It is suited to all arable soils. Two bushels of seed are requisite for an acre when sown alone, or half this quantity, when sown with clover. The seed is very light, weighing not more than twelve or fourteen pounds to the bushel. It should be cut early for hay."

"Mr. Sanders, a well-known practical farmer and cattle breeder of Kentucky, says of it: My observation and experience have induced me to rely mainly on orchard grass and red clover; indeed, I now sow no other sort of grass-seed. These grasses, mixed, make the best hay of all the grasses for this climate (Kentucky.) It is nutritious, and well adapted as food for stock. Orchard grass is ready for grazing in the spring, ten or twelve days sooner than any other that affords a full bite. When grazed down and the stock turned off, it will be ready for re-grazing in less than half the time required for Kentucky blue grass. It stands a severe drought better than any other grass, keeping green and growing when other sorts are dried up. In summer it will grow more in a day than blue grass will in a week. Orchard grass is naturally disposed to form and grow in tussocks. The best preventive is a good preparation of the ground, and a sufficiency of seed uniformly sown."

Orchard grass is less exhausting to the soil than rye grass or Timothy. It will endure considerable shade, in a porous subsoil its fibrous roots extend to a great depth. Its habit of growth unfits it for lawn grass. Its seed weighs twelve pounds to the bushel, and, to sow alone, about twenty-four pounds to the acre are required to make sure of a good crop. It should not be sown alone, except for the sake of raising the seed. It is worthy of a much more extended cultivation among us.

Wool.—The history of the growth of wool is very curious. Fifty years ago not a pound of fine wool was raised in the United States, in Great Britain, or in any other country except Spain. In the latter country the flocks were owned exclusively by the nobility or by the crown. In 1794 a small flock was sent to the Elector of Saxony as a present from the King of Spain, whence the entire product of Saxony wool, now of such immense value. In 1809, during the invasion of Spain by the French, some of the valuable crown flocks were sold to raise money. The American Consul at Lisbon, Jarvis, purchased fourteen hundred head, and sent them to this country. A portion of the blood of these pure unmixed Merino flocks is to be found in Vermont at this time. Such was the origin of the immense flocks of fine wooled sheep in the United States.—*Farmer's Advertiser.*

The American Farmer.

Baltimore, April 1, 1868.

TERMS OF THE AMERICAN FARMER.

SUBSCRIPTION TWO DOLLARS PER ANNUM.

RATES OF ADVERTISING:

Eight lines of small type constitute a square.

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Half Page.....	15.00	35 00	60.00	110.00
One Page.....	25.00	60.00	110.00	200.00

PUBLISHED BY

WORTHINGTON & LEWIS.

New Office, 4 South Street,

Near Baltimore Street,

BALTIMORE.

The Charge of False Packing—The Tobacco Trade Association.

An association under this title has been formed in Baltimore, of which William B. Hill, Esq., of Prince George's county, is President, Henry Duvall, Esq., Vice-President, Charles Ferguson, Esq., Secretary, and F. Scheppler, J. Townshend and G. Gieske, Esqs., Executive Committee.

Such an association may do excellent service to this trade, so valuable to Baltimore and to Maryland, and we are glad to see it has already given attention to several matters of much importance which have been brought to the notice of the Legislature. Such are the removal of tobacco warehouses to Canton, a favorite topic of agitation by the holders, and speculators in Canton stock; the renting of the warehouses, &c. The Legislature is the grand inquest of the State, and theoretically, a legislative committee should be a serious sort of matter, but practically, it is well understood to be a company of pleasant fellows, who go to Baltimore at the expense of the State, take the most comfortable quarters, have the best to eat and drink, rush around in carriages to see the little shows got up for them at the State Institutions, and return to Annapolis in a good humor generally, and especially with those who have had the best opportunity of making themselves agreeable. We are far from quarreling with so amiable an exhibition of official inquest, and really think that this is about the best turn these legislative inquiries can take; but we are at a loss to see why the recommendations of such committees should have any consideration beyond the demands of official courtesy. An association of gentlemen thoroughly interested in the whole matter, organised with such men as Mr. Hill, Mr. Duvall, and others as named above, is altogether a different affair. We cannot doubt that their recommendations will control legislative action in the matters named.

There is a matter more serious than any which has yet received the attention of this association, so far as we can learn from their published proceedings. We mean, the charge which has come back from foreign markets of customary frauds in packing, which have passed unchallenged through our inspection houses, to an extent that has greatly damaged the character of Maryland tobacco. The damage done to the character of a class of Maryland men is much the most serious part of this business; for as the matter now stands, the dishonorable imputation lies upon our planters as a class. We have no idea that they deserve it, and we confess to some indignation, that a committee of the Legislature, while they find it necessary to acknowledge the facts charged, should attempt to whitewash the Inspectors, whose culpable carelessness has allowed such reproach to fall upon the fair fame of a portion of the community nowhere surpassed for just and honorable dealing.

The explanation of these frauds is, that a large number of persons, including freed negroes, have within a few years become tobacco planters in the State, under the influence of the changed condition of affairs. Land-holders, who rent their lands to negroes or others, can exercise, of course, no supervision over their labours, and are in no way responsible for their conduct. But an efficient inspection could easily expose and check attempts at dishonest packing. A refusal to "pass" fraudulently packed tobacco, and a tax upon the owner for overhauling and repacking would alone, apart from the shame of exposure, very soon put a stop to such work. We believe the Inspectors have ample powers under the law as it exists, but hope they will be allowed all they ask for. Failing of detection through the inspection, it is an easy matter to trace the fraud, even after shipping, by keeping names and numbers. This new association will be able, we trust, to remedy the evil and to vindicate the reputation of our tobacco planting community.

Have we the Rinderpest?

It is denied positively that the genuine *Rinderpest* has ever yet shown itself in this country, and very firmly and forcibly maintained on the other hand, that the fatal disease which is known familiarly here as "Pleuro-pneumonia" can be no other than the scourge which in 1865 and '66 played havoc among the herds of Britain. It may not be very necessary to settle the question, and is enough, perhaps, to know, that there exists at various points in the States of Maryland and Pennsylvania a malady close enough resembling the dreaded plague, to excite our liveliest concern.

The most intelligent and concise description of the disease that we have met with, is given in the communication of Dr. G. H. Dadd, V. S., published in February number of *The Farmer*. Dr. D. calls the disease "The Contagious Typhus of the Ox," and says of it: "It is a well known fact that the bovine typhus of the United States has, hitherto, shown a preference for the lungs and pleura as its seat; hence the veterinarians have termed the malady contagious pleura-pneumonia." The character of the disease has been mistaken, he maintains, in consequence of its predominating upon, and thus appearing to be a special malady of, the lungs.

Dr. Hiram Corson, an intelligent physician of Montgomery county, Pa., has given much attention to this disease for more than a year past, during which there has been more or less of it in that and adjoining counties. In the March number of the *Practical Farmer* he gives the symptoms of the genuine *Rinderpest*, as described by the best informed observers, and says in that connection: "Let me ask any one who has seen our disease in the eastern part of Pennsylvania, if there is a single symptom of the former disease which is not found in a highly marked degree in the latter? The dull aspect, the watery eye, chilliness, cold horns, loss of appetite, decrease of milk, early constipation, followed sometimes by diarrhœa and dysentery—and in every case, discharges from nose, eyes and mouth—with increased pulse, difficulty of breathing, emaciation, desire of cold drink, exhaustion and death, in three or four days, or from seven to ten, or ten to twelve, or even later, as has been stated of Rinderpest. If these diseases are the same, careful examinations of animals dead from the disease, should reveal the fact. It is passing strange that although the latter plague has prevailed in Europe for centuries, we are not informed as to what organs are diseased. We have glowing accounts of its origin, its spread, its symptoms, and its fearful fatality, but scarcely a well-authenticated case of the appearance of the internal organs after death. But take the symptoms as given by any of the writers, and the most careless reader will be forced to the conclusion that death comes to the animal through injury done to the breathing organs. Couple this with the testimony of Dr. Smart, 'that of all the cattle examined in England, two-thirds of them were affected with Pleuro-pneumonia,' and it will be hard to believe that the two diseases are not identical."

We think it, in view of such opinions, a dictate of mere prudence to act upon the assumption that we have indeed the genuine Rinderpest, but, as yet, of a less aggravated type than that which has characterised its fearful visitations to European countries. The most vigorous efforts at isolation of infected animals and infected herds, is the very least that can be done, and in view of the almost certain death of a thoroughly diseased animal, such an one should be killed at once, and the dead, with horns, hoofs and hides, buried far out of the reach of dogs.

The best disinfectant should be most freely used about all places where cattle are confined, and they should be as little confined as a due regard to their comfort will allow.

Especially should infected herds be watched, and any attempt to sell apparently well animals, and so spread the fatal malady, should be promptly followed by prosecution in the courts. Heavy damages were awarded some months ago in Montgomery Co., Pa., in a case of this sort.

We find, since the above was written, that a bill has passed the Senate of Maryland, imposing a penalty of $500 for the offense of offering diseased animals, &c., for sale.

BUCKWHEAT.—Several correspondents ask for information about Buckwheat. Some for ploughing under and others for a crop. We do not value it for the first named purpose, though it is usually numbered with the crops most suitable. As a crop of grain, it is about equal in value to oats.

For green provender it is said to be very good for milch cows, and should be sown in

June to be fit for cutting in August. For ploughing under it may be sown at any time from the middle of May to August, and for a grain crop, should be sown not earlier than the middle of July in this latitude, nor later than 1st of August.

For the latter purpose, a half bushel of seed is sufficient; for the former, three pecks or more.

On land of indifferent quality, it should have about half the quantity of manure that wheat would need.

The grain makes good food for any kind of stock, and, bushel for bushel, is of more value than oats.

A Reconstructed Corn Planter.

Mr. Geo. C. Gilmer, of Charlottesville, Albemarle county, is not we believe, by any means, a young man, but in his farm practice exhibits a prudent enterprise and a power of accommodating himself to the changed condition of things in his State, which is worthy the emulation of the youthful and vigorous.

Mr. G. gives an account to the *Planter and Farmer*, of Richmond, of his last year's management of his corn field, from which we gather the following: Premising first that having a field of seventy-five acres to be worked in corn, capable, as he judged from past experience, of producing at the rate of five barrels per acre, he rented out fifty acres to a tenant, and reserved twenty-five acres for his own cultivation. It is not said, but may be presumed, perhaps, that the portion reserved was above the average of the whole in quality—about one-half being bottom land, in which he laid 650 yards of blind ditches. "I ploughed and harrowed it until I got it in first rate order for a tobacco crop; and while my tenant was planting corn, three weeks before I commenced, I was busily engaged in getting my land in order, and getting my manures out on five acres of the twenty-five." On the twenty acres he put one ton of Baugh's Superphosphate of Lime, and one, of the fertilizer prepared by the Southern Fertilizing Company under the direction of Prof. Gilham, and one ton of plaster. He found the fertilizers to be of about equal value.

The land was laid off in corn rows four feet apart, and in these furrows, was run a two-horse coulter, as deep as it could be done. With Routt's corn planter, which opens the furrow, drops the corn, sows the guano, and covers and rolls at one operation, the corn was planted. It was worked *but twice* after planting, and made the best crop of his life—four measured acres exceeding thirteen barrels per acre, and the whole twenty-five estimated to average ten per acre, or two hundred and fifty on twenty-five acres. "The tenant made on fifty acres just one hundred barrels of corn and nubbins," using no manure.

"I am perfectly satisfied," Mr. G. says, "we must use more manure and hire less labour—the manure pays better than the worthless labour now generally afloat in these parts."

The points to be especially noticed, besides the draining and manuring, are the thorough preparation of the ground, the very small amount of after working, and the close planting. On this last point he says: "From misjudgment or carelessness, most of the rows were only three feet apart, and the corn intended to be dropped eighteen inches apart, was planted much closer. As the season was, it was too thick."

This case sustains the opinion we have so often expressed and urged, that the work bestowed on corn in the heats of midsummer may be done in great measure before planting. Such change allows much closer planting, by discontinuing the after cultivation while the corn is young, and much closer planting than is common, is the only way to be sure of a maximum crop. A crop of corn on Mr. J. Q. Hewlett's farm, near Baltimore, which measured an average of fourteen barrels per acre, was "laid by" on the 14th of June, being little more than knee high. It was very closely planted, and would have been ruined, perhaps, by any such mangling of the roots as corn crops often receive in July.

In conclusion of his communication, Mr. Gilmer says: "I take the Baltimore *American Farmer*. Send up your *Planter and Farmer*, and your account to Charlottesville Post Office, and I will send your dues, with best wishes for your and our poor country's highest success."

☞To pursue sheep husbandry most successfully, says the *Homestead*, roots must be raised and fed; grain, either raised or bought, will be consumed, and oil meal have to be purchased for food. Their manure, then, is better for the farm than the purchase of superphosphate or guano.

Book Table.

Blackwood's Edinburg Magazine for February—from the Leonard Scott Publishing House, 140 Fulton street, N. York, is punctually received as usual. Contents: *Brownlows*, concluded—*Memoirs of Sir Philip Francis—Linda Tressel, Part V—Cornelius O'Dowd—Historical Sketches of the Reign of Geo. II., No. 1, The Queen—Fenianism; The Irish at Home and Abroad—The Queen of the Highlands.*

The Westminster Review, Quarterly, for January, from the same Publishers. Contents: *Dangers of Democracy—Physiological Psychology—Two Temporal Powers—The Church in Scotland—Extradition—The Origin of Electricity—Indian Worthies—The Abyssinian Difficulty—Contemporary Literature.*

The London Quarterly Review for January, from the same. Contents: *Sir Walter Scott—The Queen in the Islands and Highlands—Private Confession in the Church of England—Guizot's Memoirs—The British Museum—Longevity and Centenarianism—Phœnicia and Greece—Church Progress—What shall We do for Ireland?*

The Land We Love, for March. Edited by Gen'l D. H. Hill, Charlotte, N. C., is, in the quality and variety of its contents, quite worthy of the well known character of the Magazine. The article on the burning of Columbia, settles conclusively where it belongs, the responsibility for that deed of infamy.

The New Eclectic.—This handsome and valuable Magazine, maintains, in its March number, the high position gained in its earlier issues. The selections are chiefly from the best English publications. The contents of the number are: *Household Service—The Victim—The Woman's Kingdom—Anarchy and Authority—Robin and Maggie—The Recreative Use of Literature—Phineas Finn, the Irish Member—"Ecce Homo"—The Culture and Mode of Development of the Æsthetic Faculty—Reviews—Recent Publications—Miscellany—Editorials.*

The Ramie.—This is a pamphlet of eight pages, published by A. B. Bacon, of the New Orleans Picayune, giving a full description of this Textile Plant, and its mode of cultivation.

Hon. A. H. Stephens' Forthcoming Book.—We have received a copy of the introductory of the new volume of Hon. A. H. Stephens, of Georgia—"A Constitutional View of the Late War between the States: its Causes, Character, Conduct and Results."

The Northern Monthly is an able Magazine of Literature, published by M. R. Dennis & Co., 132 Nassau st., N. York. A prominent article in the March number aims to give to one Benjamin Lundy, who lived at one time in Baltimore, the credit of being prime mover, and William Lloyd Garrison, his disciple, in the great Abolition Crusade which has overwhelmed and desolated thousands of happy homes, and revolutionized "the best Government in the world."

The League is a monthly publication issued by the American Free Trade League. The March number contains report of numerous addresses delivered and letters read at a dinner given to Wm. Cullen Bryant, who is President of the League. It is devoted, of course, to Free Trade principles.

Fifth Annual Report of the Proceedings of the West Jersey Fruit Growers' Association. Also Address and Proceedings of The Anti-Monopoly State Convention held at Trenton, January 22d, 1868.

William Parry, Esq., Corresponding Secretary, &c., has obliged us with these.

DeBow's Review, for February, is an able number, well supporting the high character of the Review.

A New System of Bee Keeping, is the title of a little work of seventy-five pages, by D. L. Adair, of Hawesville, Ky.

☞We are indebted to Maupay, Hacker & Co. for a copy of their Calender and Seed Manual, for 1868. Adapted to the Northern and Southern States—Nos. 803 and 805 Market street, Philadelphia.

☞To raise an abundance of grass is the foundation of all good husbandry, and should be the first and last effort of every person who desires to be a successful and prosperous farmer.

ADVERTISEMENTS.—In our last issue notice of the following was omitted:

Agricultural.—The well known *Bickford & Huffman Grain Drill*, offered by William L. Buckingham, General Agent, Baltimore, at reduced prices.

Nurseries—Fruit, Forest and Ornamental Trees, Shrubbery, Fruits, Vines, &c.—W. S. Little, Commercial Nurseries, Rochester, N. York.

John H. Holding, Ellmer P. O., N. Jersey.

Small Fruits, &c.—J. B. Cline, Rochester, N. York, Golden Queen Strawberry.

Mahlon Moon, Morrisville, N. Jersey.

Hop Roots, &c.—J. M. Briggs, P. M., West Macedon, N. York.

LeRoy Gates, Kilbourn City, Wis.

Field, Garden and Flower Seeds.—C. B. Rogers, Philadelphia.

Maupay, Hacker & Co., Philadelphia.

Fertilizers.—Navassa Guano Co's Phosphatic Guano, Baltimore.

Dried, Unfermented Flesh, or Ammoniacal Matter—R. W. L. Raisin, Sole Agent, No. 32 South street, Baltimore.

Thos. Baynes & Son, Baltimore—all kinds of Fertilizers.

SPECIAL.—Apropos to the arrival of the steamship "*Baltimore*" of the new line from Europe to this port. Mr. Gabriel D. Clark, at the well known establishment, Calvert and Water streets, Baltimore, wishes to call attention to a large and select assortment of Watches, Plate, Jewelry, and other articles in his line, manufactured expressly for his house and imported by the above named steamship.

Attention is also called to the advertisement of the "Horse Protector," a valuable invention for the protection, during the "heated term," of the head of this servant and friend to man.

THE BEST GRASS FOR BUTTER.—If you aim at a great flow of milk, feed clover, if you wish rich milk, and well-flavored butter, feed young timothy and white clover; if you aim at the best results, both in quantity and quality of butter, feed on fresh pastures of white clover and timothy in summer, and early-cut timothy and wheat bran in winter. The grass must be cut when heading out; or better, young aftermath well-cured. Avoid roots and garden stuff in general, if you wish a good quality of butter—though it is now held that those fed while milking or immediately before, will remedy the evil.—*Valley Farmer.*

The Ramie.

The following correspondence has been furnished us for publication. The Ramie is a new thing in the country and promises well, as many of our Southern friends think. Our wish is to gather only the intelligent opinion of those who know anything of it, and we give these letters on that account:

Near BRENHAM, Washington Co., Texas,
12th February, 1868.

Wm. Grange, Esq., Baltimore, Md.

DEAR SIR: First—excuse this sheet. Did not know I was out of better paper until it came to this!

I do not believe that the Ramie has been planted in Texas at all. I have sent for 100 plants; *I have faith in it.* I was in Europe during a great part of the past two years and during the planting season; hence my not testing it sooner. In Louisiana it appears to have been successfully grown and prepared for market.

Cotton is "played out!" I, for one, have done with it, at least for the present, and always, unless a small crop of an extra fine article.

I enclose your letter to Mr. Bacon, who will no doubt correspond with you, and retain your address, and, if you desire it, will report progress in the fall.

I fear that some little humbuggery, which I notice peeping out, may check the extension of cultivation of the Ramie; but it will be only for a time. It requires a semi-tropical climate, which is in *our* favor, and a deep, rather calcareous soil, also in our favor.

The great trouble is labor and capital. We are in a bad plight here for both.

With respects to Messrs. Worthington & Lewis, I am, yours resp'y,

THOMAS AFFLECK.

SUMMIT, Miss., Feb. 20, 1868.

Wm. Grange & Co., Baltimore.

GENTLEMEN: Your favor of the 14th inst. came to hand. I send you enclosed a small sample of Ramie fibre; it is the last I have. The demand was so great, if I had had it by bales I hardly could have satisfied all who wanted some. I have the most of the plants in this country, and will make some fibre during the coming summer season, but as there is so much demand for plants, I am not able to say how much I can make. I shall send you larger samples from the first I can

make this spring. The fibre that came in market to England was raised in Java, Sumatra, and the East Indies. It is mixed with Sea Island cotton and silk. My partner, Mr. B. Rooze, has brought the plant from the island of Java to Mexico, but he succeeded only the last three years in producing the fibre clean and in a fast way. His machine was patented last September in this country. We tried it at the late Louisiana State Fair in New Orleans. It is a success. Our climate suits the plant very well as far North as it does not freeze more than three inches in the ground. The plant can be propagated very fast from roots, cuttings and ratoons.

The price of roots is now $75 per hundred. More than one hundred cannot be sold this spring to one man, because the number of plants is as yet too limited. My partner is going back this spring to Mexico, and will bring as many roots (provided he can bring them away from that uncertain country) as I shall be able to raise; enough to satisfy all demands towards the middle of the coming summer, at reduced prices.

The Southern States can monopolize the production of the Ramie. The labor is a great deal less than cotton. It can be made a white man's crop. Ramie fibre was worth last fall 60 cents in gold, in England, per pound. Very respectfully,

G. HANIZIKER.

For the "American Farmer."

Drying the Sweet and Irish Potato.

Since the date of my letter to Dr. Marshall, published in your February number, further experiments have been made in desiccating the sweet potato, establishing facts which show that cotton, in its palmiest days, never gave such profit to the cultivator as will the sweet potato.

A bushel, when pared with the knife, (and this wastes much,) weighs 52 pounds; but when dried, only ten pounds, having lost three-fourths in bulk and four fifths in weight. Half a pound when boiled three quarters of an hour in an earthen vessel, (tin discolors,) fills a large dish; in color and flavor precisely like the root upon your table at this season of the year. Twenty cents a dish would not be considered high, and yet it gives three dollars and seventy cents a bushel to the planter, for ten cents will pay the cost of drying, and twenty cents that of boiling and freight to market. Now strike off one-half for margin and merchant's profit, and did cotton ever pay like this, when you consider that five hundred bushels to the acre is not uncommon?

You are aware that the sweet potato undergoes a chemical change a few weeks after being dug. At first it is dry and mealy, and is an universal favorite; but then it becomes soft and soggy, and is by many rejected. You will agree with me that no such change can take place in the specimen enclosed, hard as flint stone. This delicious vegetable therefore can now be placed on the table every day of the year in its best condition.

Cotton had been known for generations, but only to supply the family's need, until Whitney's genius responded to a world's demand. So also the sweet potato can be grown in fabulous quantities, but its perishable nature confines it to home consumption. The present discovery, however, will render this also a staple article of commerce. There will be a great foreign demand; for in Europe it is scarcely known, and even in our own country, West and North it is seldom seen.

You will find also specimens of the desiccated Irish potato. The first trial was a failure—they came forth almost black, and I gave it up in despair, but subsequent reflection suggested that when cooked they are *white*—what the difference? Heat. Accordingly they were submitted for a few moments to the action of steam, in order that the outer surface might be cooked to form a mucillage impervious to the atmosphere. The result was very gratifying—they came forth bright and almost semi-transparent. When boiled and compared with others you can perceive no difference.

It is evident they will keep during the longest voyage. How valuable for sea stores, with only one-fourth the original bulk, and how important in a sanitary point of view; for there is no scurvy with potatoes twice a week.

FRANCIS H. SMITH.

☞Plants derive their nutriment from the soil, and every crop removed takes away part of its productive power, which an honest farmer will take pleasure and derive profit from restoring as soon as possible.

☞Agriculture has assumed a new phase in Nebraska. The farmers are planting forest trees, which will bless future generations, if not the present.

For the "American Farmer."

The Best Farming. What is it?

A correspondent writing from Montgomery Co., Pa., over the signature "E. C. E." gives his readers, in the February number of the *American Farmer*, an interesting and instructive article on the subject of "good farming," which concludes in the following words:

"Good farming consists in developing and rendering available the mineral and carbonaceous elements of the soil for the use of the plants, just as it requires them, and thus avoid the necessity for purchasing manures and expending money outside of the farm. There are farms in Chester Co., in the vicinity of Westchester, which have for years produced enormous crops, (cultivated as above described,) and feeding off the very finest beeves, upon which there has been no expenditure for manure, not even lime, for a long series of years. They have, under a good system of farming, been self-sustaining."

The "good system of farming" described by "E. C. E." deserves careful study; and when so studied, it will be found not the *best* farming probably within the reach of the scientific cultivator of the soil. There are some soils which have peculiar and exceptional advantages in regard to plant food, because they can no more be exhausted than a living spring can be deprived of all water by daily dipping it out for domestic purposes. Sometimes water, rising from a considerable depth through a pervious subsoil, by capillary attraction, brings with it salts of potash, magnesia, soda and lime, to fertilize the surface soil without human labor; at other places water rises by hydrostatic pressure, as in many artesian wells, and brings with it fertilizing substances to enrich pastures, meadows and arated fields. There are still other ways in which moving water unseen distributes the essential food of plants more or less over the surface of farming lands.

In other cases the debris of rocks is disintegrated so easily and abundantly as to supply crops with alkalies and acids in sufficient quantity, so that old fields never need lime, gypsum, bone-dust or guano to improve them. Conceding all that may be properly claimed for rocks, soils and fountains of this exceptional character, there remains the practical value of strictly commercial manures to demonstrate the deficiency of several elements of plants in ordinary soils. If soils do not lack assimilable phosphoric acid, sulphur nor potash, why should the latter prove fertilizers of great value? Assuming that one's pastures and meadows have less bone-earth than is profitable, in selling fat steers or cows, why should he not expend a part of the money in the purchase of the raw material for making bones to replenish his soil? Pastures, meadows, wheat and corn fields generally need compensation, at least for the mineral constituents removed off the farm. In what way shall atoms of phosphorus sold in grain, hay, tobacco, meat and cheese, be restored to the soil again?

The "system" commended by "E. C. E." assumes that the soil has an inexhaustible supply of these precious atoms; and that the decaying roots of clover and grass will *forever* develop them, so that no part of the money obtained from the sale of phosphoric acid in the products of the soil, need be expended to make restitution of assimilable phosphorus.

Common experience and observation in many States and countries do not sustain this assumption. Hence the practice of making restitution in some way has become well established as an essential part of the *best* system of tillage and husbandry. Whether the elements returned to the soil are bought in the market, or derived from a judicious system of irrigation, or from the purchase of oil cake and other cattle feed, as practiced by John Johnson and many others, is a matter of no consequence as regards soundness of principle. According to the writer's observation, moving water will impart fruitfulness to land as along rivers and smaller streams, cheaper than can be done in any other way, independent of this physical power. For instance, near me, river bottoms often fertilized by rich sediment, yield annual crops of corn, that are sold at forty to fifty cents a bushel. Upland farmers buying corn at these prices, can make bacon at a profit by feeding it, while the manure derived from the corn gives the material to recuperate upland corn and wheat fields, meadows and pastures. If the river bottoms did not receive fertilizing particles from the distant mountains, hills and plains, they could not produce corn so largely and cheaply, nor could manure for upland be had on so favorable terms.

I suspect that the thrifty farmers of Chester Co., Pa., get more fatness from spring, brook and creek water, and low grounds, than is

generally believed. These compensate for the mineral elements of crops and farm stock sold without apparent restitution. Artesian wells not less than natural springs of water, make beautiful oases in the desert of Sahara. *Restitution* in some form is indispensable to the best system of agriculture. D. LEE.

Gap Creek, Knox Co., Tenn.

The Cultivation of Hops.

To satisfy further the demand for information on the subject of hop-growing, we give the following extract from an article in the *Chicago Times*, treating the subject very fully. The writer gives results which indicate very great profits from the crop in the State of Wisconsin. The product of that State the past year is put at 7,000,000 lbs., while the census returns for 1840 shows only about 1,200,000 lbs. for the whole United States, and the crop of Wisconsin will be more than doubled the coming season:

THE BEST SITUATION FOR A HOP-YARD.

In the selection of a site for a hop-yard, it is best to avoid low and wet localities, and to select some spot where the circulation of the air is good, and where no water stands upon the ground at any season of the year. The hop in such locality "fills" much better, and is less liable to blight and mildew, or to suffer from the attacks of vermin. As the vines grow very dense, however, and present a good deal of surface to the wind, I apprehend that, in those portions of the country where very high winds are prevalent, it might be possible to select a location too much exposed. The hop-vine, as far as it is concerned, will grow almost anywhere; but, in order to insure perfect fruit and abundant yield, certain kinds of soil are necessary. It is grown with good success on sandy soil, but appears to flourish best on a clay loam, especially when underlaid with limestone.

For convenience in harvesting and curing, it is desirable to have the hop-yard as near the farm-house as possible, because, if located at a distant part of the farm, much valuable time will be consumed by the forty or fifty pickers in going backward and forward, when, perhaps, the time wasted is of ten times the value of the wages paid them.

PREPARATION OF GROUND—PLANTING.

The ground should be prepared thoroughly in about the same manner as for corn, and well pulverized. The hills should not be less than eight feet apart in all directions, and I incline to the opinion that nine feet would be much better; and as the yard, once planted, lasts for years, great pains should be taken to make the hills at a uniform distance, so as to be in a perfect line in each direction. A long line should be used in locating the hills, and the spaces between them accurately measured. It is absolutely necessary that there should be a free passage of air through the whole yard, and, when the hills are made at uniform distances and in straight lines in all directions, the air can circulate between them with more freedom, and the advantages to be derived will more than compensate for any trouble in locating the hills properly at the commencement.

When the hills have been located, the earth should be removed from about a foot square and filled with carefully pulverized soil. In this, place three roots, the "eyes" up. The soil should be tramped gently around them, and they should then be covered to the depth of about two inches. It is proper to mention here that the hop, like many other things, does not produce its own variety with any degree of certainty from the seed, and is propagated altogether from the roots, which can be obtained from any old yard in great abundance.

The hops are divided into two sexes, the male and the female (or the *staminate* and *pistellate*)—the former bearing no fruit, but still necessary, in all "well regulated" hop-yards to render the other vines fruitful. In planting the first row in a hop-yard, the fifth hill from the place of commencment should be planted with female roots until the tenth hill is reached, which should be planted with male roots; and so on, each tenth hill being planted with male roots throughout the row. The male roots are not planted in every row, but in each tenth row throughout the yard (where they are planted as in the first row,) the intervening rows containing none but female roots. A permanent stake should be driven in all the male hills, to designate them from the others. In ordering hop roots for a new yard, which can be done from any old hop-grower anywhere, and the roots sent in barrels by express, they will be cut up in pieces of the required length, and the male roots put up in a small package, to designate them from the others.

The proper time for planting is as early as the ground will do to work in the spring.—The frost will not kill the roots after they are planted, so there is no fear of planting them so early as to endanger them by the occurrence of an unlooked-for cold spell.

CULTIVATION.

The cultivation of the hop, the first season, is confined almost exclusively to keeping them free from weeds. They will yield a light crop the first season, but scarcely enough to pay for looking after, unless prices should be very high. During the first season, it is not absolutely necessary to provide them with poles to climb upon; but, where small poles can be procured without too much trouble and expense, it is better to use them, as they mark the location of the hills and prevent the roots and vines from being broken in cultivating.—During the first season, corn or potatoes, or, what is better, alternate rows of corn and potatoes, which let in more air and sunshine, can be planted between the hills of hops, and cultivated in the usual manner.

Late in the fall, when the frost has killed the vine, it should be cut off close to the ground and the hill covered with two or three forkfuls of "long" manure or mulched well with straw, to prevent the vines being killed by the intense cold of winter. This mulching must be followed up each winter, during the life of the yard. I say "must be," because everybody does it; but I have conversed with several parties who profess to believe that the vines will stand the winter successfully without mulching.

PATRONS OF HUSBANDRY.—This is the title of a secret order recently organized in Washington, D. C., whose object is declared to be the promotion of the interests of Agriculture and Horticulture in the United States. Wm. Saunders holds the position of Master; John R. Thompson, Vt., that of Lecturer; A. Bartlett, Ohio, Overseer; Wm. Muir, Mo., Steward; Rev. A. B. Grosh, Pa., Chaplain; W. M. Ireland, Pa., Treasurer; O. H. Kelly, Minn., Secretary, and E. P. Faris, Ill., Gate-keeper. In a circular the officers say a constitution has been prepared for the guidance of the Order. The initiatory degrees will be four, representing the seasons. Persons of both sexes, (females over sixteen and males over eighteen,) will be admitted to membership—with the purpose of rendering rural life more attractive, while diverting attention from exciting amusements of a questionable character.

The Cornell Agricultural University.

The announcement of this School we have already noticed from time to time. A meeting of the Trustees was lately held in Albany, and from the action then taken and the report presented by the President of previous action, we give the following list of the Faculty:

Professors—Resident.

Mathematics—Evan W. Evans, A. M.

Physics, &c.—Eli W. Blake, Ph. D.

Chemistry—Jas. M. Crafts.

Agricultural Chemistry—Geo. C. Caldwell.

Agriculture—Joseph Harris.

Mining and Metallurgy—J. H. Mitchell, A. B.

Military Science—Maj. J. H. Whittlesey. U. S. A.

Natural History and Comparative Anatomy—Burt E. Wilder, M. D.

Languages of Southern Europe—W. E. Russell, A. M., also Associate Professor of History.

Languages of Northern Europe—Daniel W. Fiske, A. M., also Librarian.

Professors and Lecturers—Non-Resident.

Natural History—Prof. Agassiz, Cambridge, Mass.

Agriculture—Fred. Holbrook, Brattleboro, Vermont.

Geology—James Hall, Albany.

English Literature—Jas. Russell Lowell, Boston.

Recent Literature—Geo. Wm. Curtis, New York.

Constitutional Law—Theodore A. Dwight, LL. D.

President White's plan for the building up of the University is to have mainly young and active men—men who have a reputation to make. Prof. Harris, who is to occupy the chair of Agriculture, is known to the agricultural public as an accomplished writer and practical farmer in taste and education. The duty asked of Gov. Holbrook is, the delivery of 20 lectures a year, bringing to the service the experience of a life devoted to agricultural observation and reflection. The President proposes to spend the interval previous to the next meeting of the Board in July, in visiting Europe, to purchase apparatus, books, &c., such as are needed; and also to visit institutions of the kind in England, France and Germany.

From the Germantown Telegraph.

Wheat and its Culture.

MR. EDITOR: We had an interesting time the last meeting of our Social Club. The attendance was more numerous than at any former meeting. The conversation was on Wheat and its Culture, and I herewith furnish you with a sketch of what was said on this subject, which is to us farmers quite an important one.

The Secretary was appointed to open the subject, who thought that a majority of our farmers were too careless in selecting their seed wheat; while many of them took particular care in selecting and keeping their seed corn, they seem to forget that the same rules would apply just as well to wheat. His plan was to select his seed wheat in the field before cutting; he usually picked out about an acre, and allowed it to stand until fully ripe, and then cut and hauled it direct to the barn; he usually went through it once before it was too ripe, for the purpose of removing any stalks of rye or cockle which might chance to grow. His acre usually produced about twenty-five bushels. This he ran through the fan twice to remove the chaff, and then through a third time with the fan, running at a high rate of speed, in order to blow out the light grains. By this practice he usually reduced his twenty-five bushels, each of sixty-two pounds, to twenty, each weighing sixty-four pounds. This is enough to put in from ten to twelve acres, he used for seed. The light wheat thrown over was again thrown into the pile and taken to the mill and ground for home use. He drilled in his seed at the rate of one bushel and one peck per acre, and was of the opinion that a majority of our farmers used too much seed. He had found that one grain of wheat, in common field culture, would produce four or five stalks if room was afforded it to spread, hence his opinion as to the amount of seed. In good garden soil he had produced twelve stalks to one grain, and each stalk produced a good sized head of grain. He always rolls his wheat field in the spring, as soon as the ground is dry enough, in order to press back and cover any roots which may have been thrown out by the frost. Thinks this operation of great benefit to the growth of the clover seed, which is sown just previous to the rolling.

Another member also brought his seed wheat into the barn with the other, but saved more than one acre. In order to get the seed he thrashed the sheaves for a short time with a common flail; this removed only the ripest and heaviest grains. By this plan he had no difficulty in obtaining seed which would weigh sixty-three pounds per bushel from the bulk of his crop, which averaged but sixty-one pounds per bushel. He very seldom used so much seed as a bushel and a peck, often one-half peck less. Does not roll his wheat field in the fall, as he thinks the ridges left by the drill should moulder down on the wheat by the action of the frost during the winter. Always cuts his wheat some ten days before it is fully ripe, and then with a reaper which deposits it in the proper-sized bundles for sheaves. One year he tried separating the lighter grains from his seed by the use of brine, but did not like it as well as his present plan, which was more economical. Had tried ploughing twice for wheat, but did not think it of much benefit to the wheat, but was very beneficial to the ensuing crops of grass.

The next member who delivered in his opinion joined farms with the last one, and followed the same plan in selecting his seed, but used rather more to the acre, say a bushel and twelve quarts. Had tried several home-made and bought manures to help out his manure pile, but found that common salt and lime gave him the greatest benefit at the least expenditure of capital. He mixed five bushels of coarse salt with ten of air slacked lime three months before it was needed, and during this time turned it three times; sowed it broadcast before the last harrowing, at the rate of three bushels per acre. If he had not barnyard manure enough, he preferred to spread it over the whole field, and apply the lime and salt mixture before the wheat was drilled, and over all the field. He considered common salt as an excellent top-dressing for wheat *on his land*, but cannot speak for other soils. He has sowed five bushels of common plaster instead of the ten bushels of air slacked lime, and thinks the effect was about the same in both cases. He has used salt for various crops not now under consideration with like success, but would not recommend it for all soils.

Another member had experimented in the manner of applying barnyard manure to wheat, and reported the result as follows: His usual plan is to plough twice, but year before last he was pushed for time and short of help, and not expecting to have time to

plough twice, he hauled out his manure and spread it on the oat stubble in the usual manner, and ploughed it under to the depth of about eight inches. After the field was all ploughed, finding that he had some spare time, he set his man and team to ploughing a portion (about two acres) a second time, which was done about an inch deeper than the first ploughing. The manure of the two acres was, when it was applied, in the state in which manure usually comes out of the yard in the spring, and had been ploughed under about two weeks before the commencement of the second ploughing. The manure was not in the way of the second ploughing, and there was no more left upon the surface than upon the rest of the field where it was ploughed but once. During the spring and summer the wheat upon the part of the field twice ploughed looked better and of a darker green, and at harvest yielded the heaviest and best filled wheat. The grass on the two acres is quite as good as the other, but to all present appearances the artificial grasses (clover and timothy) will be crowded out by the natural growth sooner on the two acres than on the rest of the field.

He had tried ploughing manure of the same field under at different depths, of six, seven, nine and ten inches, and found his best plan to be to plough down his stubble to the depth of nine or ten inches (his surface soil is about eleven to twelve inches thick,) then haul out and spread the manure, and after pressing it down with a heavy roller, turn it under to the depth of but five or six inches. He has raised fine wheat by sowing his seed on the manure and ploughing it under as above. Had also tried spreading the manure upon the surface, after the wheat was drilled in, and could not perceive any difference in effect.

One season his finest wheat was about a half acre, for which he had not barnyard manure, and instead covered the ground after the wheat was sown with a thin layer of dry wheat straw; on this patch the wheat was heaviest, and withstood the bad effect of a dry season much better than the rest of the field. The grass seed took better on the half acre than on the balance of the field, but did not yield as good crops of hay and was sooner driven out by the natural ones. Since then he always manures a small patch of rye (sown for the straw) in this manner, and thinks the straw of the rye is better for his purpose (tieing cornfodder) than if he had used barnyard manure.

The President thought that many of our practical farmers sowed too little grass seed with their wheat to insure a good crop of grass; the usual amount is four of timothy and about the same of clover; he usually sowed four of timothy and about seven or eight of clover, and had always a good crop of clover for mowing the first year after wheat; he thought this extra clover seed enabled him to cut at least half a ton more of hay to the acre. His plan was to sow timothy before the drill when putting in wheat, and sow the clover in the spring when the ground was freezing at night and thawing during the day, say about the first of March, or the first week in March.

Several other members participated in the conversation, but as the foregoing embraces the points of all that was said and your space is being filled up with my communication, I am obliged to refrain, and subscribe myself, on behalf of our little club,

Yours most respect'ly, SECRETARY.

Montgomery Co., Feb. 1868.

Sweet Potatoes.

To make potatoes, it is necessary to plant in tolerably rich, sandy soil, inclined to be moist but not wet. The preparation of ground consists in deep ploughing, in the winter, and frequent stirring of the earth by more shallow ploughings, in the spring, to keep grass and weeds down until your plants are ready to set out. In order that you have the plants early I would recommend bedding the potato, from the middle of March to the first of April, (first week of April early enough here,) as follows:

Select a piece of ground near a branch, with a Southern exposure—I prefer sandy soil—spade it deep, rake and level it; then lay it off in beds four feet wide—take off about two inches of the top of the earth and sprinkle a light covering of well rotted stable, or cow yard manure, over the bed. On this place your potatoes, yams and yellow Spanish, leaving the width of your fingers between each potato. After the bed is filled with potatoes, as above directed, cover them with fine, well rotted manure—with a spade throw on the earth three inches deep—taking it so as to open a trench around each bed, to prevent

them from holding too much water. As weeds and grass spring up, shave off the earth with a weeding hoe, and as the weather gets warm, water them with a watering pot, every evening. You will have an early and luxuriant growth of plants. These must be drawn carefully from the beds when they get two or three inches high, placed in a hamper basket, and set in water some hours before you intend setting them out, particularly if the ground is not in good order for transplanting. With a turning shovel lay off rows three feet wide and plough out deep and close. Cross plough with one or more furrows and draw up the earth with a weeding hoe so as to form a small hill, and insert one draw or plant in each hill, leaving the bud and one inch of the plant above the earth. Cultivate them well, by ploughing close and deep with a scooter plough early in the season, and draw the earth to the plant with the hoe in May and June, when the vines cover the ground so that you cannot use the plough. Keep them clear of weed and grass and, if the seasons suit, you will make fine potatoes. I would remark that it is not necessary for the earth to be wet for transplanting the potato. By planting early in the season, before hot days arrive, you can set them whenever you can plough up damp earth, if you will transplant late in the evening and water with half a pint of water to each hill on the evening of transplanting.—D. B. Searcy.— *Communicated by Dr. Camak, from transactions of the Southern Central Ag'l Society.*

In transplanting in dry weather, after inserting the "slip" in the hole prepared for it, throw in a little dirt on the root, then pour on water and after this has been absorbed, fill up with dry dirt. This is the most successful method of transplanting all kinds of vegetables.—*Southern Cultivator.*

☞An exchange says a farm devoted to grass and apples will bring the most money. Rightly managed, these crops are like grace and faith, growing better through the whole of one's life.

☞Ohio is reported to have more sheep than any other State in the Union—6,568,052 out of the 32,695,797 in the United States. In 1866, the live stock of Ohio was valued at $151,000,000.

Value of Manure from Different Animals.

It has long been a favorite idea with farmers and gardeners that the manure produced by different kinds of animals varies very much in value. Much, it is true, is generally attributed to the character of the food from which the manure is made. The rich food usually fed to pigs is, of course, known to have a powerful influence in producing a better article of manure than can be obtained from cattle fed on straw. But at the same time it is generally believed that even if precisely the same food be furnished to animals of different species, there will be a difference in the properties and qualities of the manure. In other words that cattle, horses and sheep, all fed on grass, will each produce a manure of a different quality.

In a recent number of his "Walks and Talks on the Farm," Mr. Harris takes exception to this doctrine, and brings a large amount of chemical talk to prove that it has no foundation in fact. He holds that "the difference is hardly worth considering, and it is a pity that scientific agricultural writers should so frequently allude to it." "It is a fact—and I wish every farmer fully comprehended it—that the value of the manure from any animal depends *entirely on the food.*" "If I have 30 tons of straw, 50 tons of corn stalks, 40 tons of hay, 2 tons of bean straw, 1,000 bushels of corn and 10 tons of oil cake, to feed out on the farm during the next six months, it will make no appreciable difference in the value of the manure to what kind or class of animals I feed it."

From this we would most emphatically dissent. Unless both chemists and practical men are greatly mistaken it is true beyond all question that the same food passed through different animals will give very different results in the manure heap. It is obvious that, the food being the same, the value of the resulting manure will depend chiefly upon the following points:

1. The amount of matter carried off the farm in such products as milk, wool, pork, beef, &c.

2. The proportion of the food which is dissipated by the animal in performing the functions of life.

3. The physical character of the resulting manure.

In regard to the first point: If our readers will examine the reports of the discussions at

the meetings of our Dairy Associations they will find that the subject which has recently attracted the greatest amount of attention is the exhaustion of the land of the phosphates. Where have they gone? Carried off in milk and cheese! Would the annual fattening of an amount of pork equal in weight to the dairy stock employed have exhausted the land to an equal extent? We can hardly believe it. So, too, in regard to the wool grower. The fleece of each Merino sheep removes from the farm from five to nine ounces of potash, besides what is carried off in the carcass. It would be difficult for the chemist to find the same amount of alkali in the hair of the hog. Again: Let us consider the case of young animals. Is all the phosphoric acid and nitrogen which is found in the bones and flesh of a two-year old heifer "hardly worth considering?"

Let us now turn to the second point—the amount dissipated by the animal in performing the functions of life. It is well known that a very large percentage of the food is dissipated in respiration and perspiration. Careful examination shows that the weight of the dried fleeces rarely equals more than two-thirds of that of the food in a similarly dry condition. Stockhardt investigated this subject with great care, and thus gives the percentage of loss in one hundred parts of the following substances as contained in the food consumed by the animals named:

	Carbon.	Hydrogen.	Oxygen.	Nitrogen.
Sheep, waste.....	44	6	48	7
Horse, "	63	57	56	15
Cow, "	46	47	51	13

One hundred parts of *dry* fodder in general lost, in a sheep, 40; in a hog, 64; in a horse, 60; in a cow, 40.

It will thus be seen that the amount of nitrogen wasted by the sheep is less than half of that wasted by the horse. Is not this worth considering?

Upon the physical condition of the manure it is unnecessary to dwell. Every gardener understands it fully.

It is not our intention to maintain that in the selection of his stock the farmer should be guided wholly by the character of the manure produced. As a general rule the difference in the quality of the manure will not make up for the difference of profit which may be produced by a judicious or injudicious selection of stock. We are of those who regard manure as a secondary consideration in the feeding of stock, and who do not believe in wasting rich nitrogenous food *merely* because we get some return in the manure heap. But we do think that in making his general calculations no farmer can safely disregard the question we have discussed. And if he consider it at all it may be as well that he should have a good sound basis of facts for his conclusions, instead of deriving them from such absurd assertions and theories as those uttered by the newly-fledged resident "Professor of Agriculture" (?!!) in what is designed to be the leading Agricultural Institution of America.—*Rural New Yorker.*

Corn Husks.

A correspondent of the *Farmer's Advertiser*, on the value of corn husks, states the following facts:

It has been discovered in Austria, that sixty per cent. of the weight of corn husks are of value in the arts. They obtain, from every 100 lbs. of husks, 20 lbs. of excellent varieties of paper, 25 lbs. of long fibre, suitable for spinning and weaving into a cloth of great strength and capacity for resisting all tendency to decomposition, and 15 lbs. of farinaceous substance, which, by itself, or added to wheat flour, makes an excellent bread, that will keep sweet and good for months, and is thus well adapted to supply the place of hard tack in armies and at sea.

Of their value to the upholsterer, he says:

Husks are now worth $70 per ton in St. Louis, for the manufacture of mattresses.—This is from four to six times the value of hay. To prepare them for market, it only needs to split them once or twice, and bale them.

Suppose our farmers jerked their corn from the stalk, husks and all, (they could do it much more quickly than they could husk it, and would thus avoid bad weather;) then, having it safely housed, they could employ their entire force under cover, during the stormy days of winter, in husking their corn, and at the same time utilizing their husks, a most important portion, hitherto almost wholly wasted.

☞ From the census of New York, in 1865 it seems that the number of sheep in the State was 5,521,610, an increase of 71 per cent. in ten years.

Sunday Reading.

Just as Christ is both the physician and the medicine, the priest and the sacrifice, the redeemer and the redemption, the legislator and the law, the doorkeeper and the door, so also is He both the sower and the seed. For indeed the very Gospel itself is no other than Christ Incarnate, born into the world, preaching, dying, rising again, sending forth His Spirit, gathering His church, sanctifying it, governing it.

One cannot proceed one step in reasoning upon natural religion any more than upon Christianity, without laying it down as a first principle, that the dispensations of Providence are not to be judged of *by their perversions*, but by their genuine tendencies, not by what they actually seem to effect, but by what they would effect, if mankind did their part; that part which is justly put and left upon them.

Religion sometimes runs into stalk and blade, into leaves and suckers, which should be concocted into pith and fruit.

The bark of a tree contains an oily juice which, when it is in greater plenty than can be exhaled by the sun, renders the plant evergreen. Such is the state of the man, whose virtue is proof against the scorching heat of temptation and persecution; he is like a "green olive tree" in the courts of the temple; "his leaf shall not wither."

There is a kind of sanctity of soul and body, that is of more efficacy for the receiving or retaining of Divine truth, than the greatest pretences to discursive demonstration.

Christianity is the easiest and the hardest thing in the world. It is like a secret in arithmetic; infinitely hard till it be found out *by a right operation*, and then it is so plain, we wonder we did not understand it earlier.

Think what shame it will be to have it said, that many honest heathens spent more thoughts about a future life, and loved it more, and enjoyed it more, while it was a mere conjecture with them, than *we* do, now it is a certainty.

The most obvious and most general notion of *Catholicism* consisteth in the diffusiveness of the Church, grounded upon the commission given to the builders of it. "Go, teach all nations," whereby they and their successors were authorized and empowered to gather congregations of believers, and to extend the borders of the Church unto the utmost parts of the earth. The synagogue of the Jews especially consisted of one nation, and the public worship of God was confined to one country. The temple was the only place in which sacrifices could be offered, in which the priests could perform their office of ministration; and so, under the law, there was an inclosure divided from all the world besides. But God said unto His Son, "I will give Thee the heathen," &c. Thus the Church of Christ, in all its primary institutions, was made to be of a diffusive nature, to spread and extend itself from the city of Jerusalem, where it first began, to all the parts and corners of the earth. This reason did the ancient Fathers render, why the Church was called Catholic, and the nature of the Church is so described in the Scripture.

The deepest waters run stillest. True joy is a solid grave thing, dwells more in the heart than in the countenance; whereas, on the contrary, base and false joys are but superficial, skin-deep, as we say; they are all in the face.

If thou have an ear for God, though deaf to men, how much happier art thou than those millions of men, that have an ear for men, and are deaf to God.

Beware of driving too furiously at first setting out. Take the cool of the day. Begin as you can hold on. In a word, endeavor to hit the just medium, so as neither to make too much haste, nor too little speed; neither to loiter, nor to run yourself out of breath.

Religion is like the firmament, in which new stars are found to appear the more intently one gazes upon it; it is like the *sea*, which seems to grow in vastness the more we contemplate it; and it is like gold, which in proportion as it is cast into the crucible, shines out with greater lustre and purity.

Half our virtue arises from our being out of the way of temptation.

CHOICE SEED POTATOES.

We offer prime seed of the annexed varities, valuable for their GREAT PRODUCTIVENESS, SUPERIOR QUALITY and ENTIRE FREEDOM FROM ROT:

EARLY GOODRICH.....$3.00 per bushel
HARISON.....5.00 " "
CUZCO, GARNET CHILI and WHITE PEACHBLOW.....2.50 " "

Prices, in quantity, on application.

EDW'D J. EVANS & CO.,
mar-2t Nurserymen and Seedsmen.

Baltimore Markets, March 21, 1868.

COFFEE.—Rio, 15a17¼ cts. gold, according to quality; Laguayra —a— cts., and Java —a— cts.

COTTON.—We quote prices as follows, viz:

Grades.	*Upland.*	*Gulf.*
Ordinary	21¼	00
Good do	23	00
Low Middling	23a24	00
Middling	24¼a25¼	00

FERTILIZERS.—Peruvian Guano, $80; California $70; Rodunda Island $30; Patapsco Co's $60; Reese & Co's Soluble Pacific Guano, $65; Flour of Bone, $60; G. Ober's (Kettlewells) AA Manipulated, $70; A do. $60; Ammoniated Alkaline Phosphate, $55; Alkaline Phos. $45; Baltimore City Company's Fertilizer, $40; do., Flour of Bone, $60; do., Ground Bone, $45; do., Poudrette, $20; Baugh's Raw-bone Phosphate, $56; Baugh's Chicago Bone Fertilizer, $46; Baugh's Chicago Blood Manure, $50; Maryland Powder of Bone, $46; Rhodes' Super-Phosphate, $55; Lister's Bone Super-Phosphate $55; Berger & Buta's Super-Phosphate of Lime, $56; Andrew Coe's Super-Phosphate of Lime, $60;—all per ton of 2,000 lbs.; Pure Ground Plaster, $13.50a$14.00 per ton, or $2 50 per bbl. Shell Lime slaked, 6c., unslaked, 10c per bushel, at kilns.

FLOUR.—Howard Street Super, $9.50a10.25; High Grades, $11.50a12.25; Family, $12.50a13.00; City Mills Super, $10.00a10.25; Baltimore Family, $14.50a15.00.

Rye Flour and Corn Meal.—Rye Flour, $8.50a9.00; Corn Meal, $6.00.

GRAIN.—*Wheat.*—Good to prime Red, $2 70a2.90; White, $2.80a3.00.

Rye.—$1.85a1.90 per bushel.

Oats.—Heavy to light—ranging as to character from 84 a86c. per bushel.

Corn.—White, $1 10a1.11; Yellow, $1 17a1.19 per bushel.

HAY AND STRAW.—Timothy $20a22, and Rye Straw $19 a$20 per ton.

PROVISIONS.—*Bacon.*—Shoulders, 12¼a12¼ cts.; Sides, 14¼a15 cts.; Hams, Baltimore, 18a20 cts per lb.

SALT.—Liverpool Ground Alum, $2.00a2.10; Fine, $2 90 a$3.10; Turk's Island, 53a55 cts. per bushel.

SEEDS.—Timothy $2.87a3.00; Clover $8 50a9 00; Flax $3.00.

TOBACCO.—We give the range of prices as follows:

Maryland.	
Frosted to common	$3 75a 4.50
Sound common	4.50a 5.00
Middling	7.50a 9.50
Good to fine brown	10 00a15.00
Fancy	17.00a25 00
Upper country	3.00a20.00
Ground leaves, new	4.00a13.00

Ohio.	
Inferior to good common	5 00a 6.00
Brown and greenish	6.00a 7.00
Medium to fine red and spangled	7.50a15.00
Fine spangled	15.00a20.00
Fine yellow and fancy	20.00a30 90

WOOL —We quote: Unwashed, 28a30 cts.; Tub-washed, 38a40 cts.; Pulled 30a36 cts.; Fleece —a— cts. per lb.

CATTLE MARKET.—Common, $4.50a5 50; Good to fair, $6 00a6.75; Prime Beeves, $8 00a10.00 per 100 lbs.

Sheep—Fair to good, 5¼a6¼; extra, 7a8 cts. per lb., gross.

Hogs—$12.00a13.75 per 100 lbs., net.

Wholesale Produce Market.

Prepared for the American Farmer by HEWES & WARNER, *Produce and Commission Merchants, 18 Commerce street.*

BALTIMORE, March 23, 1868.

BUTTER —Western solid packed 20a45 and Roll 35a52; Glades, 35a45; Goshen, 50a60.

BEESWAX—38a40 cts.

CHEESE.—Eastern, 15¼a17; Western, 14a15.

DRIED FRUIT.—Apples, 6 to 7; Peaches, 8a10.

EGGS—25a27 cents per dozen.

FEATHERS.—Live Geese, 60 to 80 cents.

LARD.—Western, 16a16½; City rendered, 20 cts.

TALLOW.—10a11 cents.

POTATOES.—$1 00a1.35 per bushel.

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